```
@article{Hamza2023,
title = {BeeLive: The IoT platform of Beemon monitoring and alerting system for beehives},
journal = {Smart Agricultural Technology},
volume = {6},
pages = {100331},
year = {2023},
issn = {2772-3755},
doi = {https://doi.org/10.1016/j.atech.2023.100331},
url = {https://www.sciencedirect.com/science/article/pii/S2772375523001600},
author = {Abdelbaset S. Hamza and Rahman Tashakkori and Bejamen Underwood and William O'Brien and Chris Campell},
keywords = {Beehive, Honey bees, Internet-of-Things (IoT)},
abstract = {Monitoring honey beehives is mainly done manually by beekeepers to evaluate the health of their hives and determine their growth and yield. With the emergence of Internet of Things (IoT) devices and tools, there have been some efforts in recent years to automate such monitoring. This can significantly benefit beekeepers as they can obtain critical data and insight into their hives' health and performance more regularly. In this paper, we use IoT devices and the Thingsboard dashboard to track the status of 28 honey beehives installed in the Western region of North Carolina as part of the Appalachian Multi-Apiary Informatics System (AppMAIS) project. In order to acquire data from a beehive, humidity and temperature sensors, as well as a microphone, have been placed inside the hives. In addition, a video camera has been placed at the top of the hive's entrance to obtain video recordings of the bees entering and leaving the hives, and a scale is placed under the hive to report the weight. The data collected from the sensors and peripherals installed in each of the AppMAIS hives are sent to the Thingsboard dashboard for management and visualization. In this paper, we report on our success with Thingsboard IoT tool to monitor honey beehives and take advantage of their capabilities to interact with the devices as needed to adjust operational parameters.}
}

@InProceedings{Reis2020,
    author="dos Reis, Alexandre Soares
    and Gielen, Elien
    and Wopereis, Ko
    and Pasternak, Marcel
    and Sooäär, Vaido
    and Schneider, Tobias
    and Duarte, Abel J.
    and Malheiro, Benedita
    and Justo, Jorge
    and Ribeiro, Cristina
    and Silva, Manuel F.
    and Ferreira, Paulo
    and Guedes, Pedro",
    editor="Silva, Manuel F.
    and Luís Lima, José
    and Reis, Luís Paulo
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    and Sanfeliu, Alberto
    and Tardioli, Danilo",
    title="Smart Companion Pillow -- An EPS@ISEP 2019 Project",
    booktitle="Robot 2019: Fourth Iberian Robotics Conference",
    year="2020",
    publisher="Springer International Publishing",
    address="Cham",
    pages="465--476",
    abstract="This paper describes the design and development of a Smart
Companion Pillow, named bGuard, designed by a multinational and
multidisciplinary team enrolled in the European Project Semester (EPS) at
Instituto Superior de Engenharia do Porto (ISEP) in the spring of 2019.
Nowadays, parents spend most of the day at work and become naturally worried
about the well-being of their young children, specially babies. The aim of
bGuard is to provide a 24-hour remotely accessible baby monitoring service,
contributing to reduce parenting stress. The team, based on the survey of
related products, as well as on marketing, sustainability, ethics and
deontology analyses, developed a remotely interactive Smart Companion Pillow
to monitor the baby's health and room air quality. The collected data, once
it is saved on an Internet of Things (IoT) platform, becomes remotely
accessible. The bGuard pillow, thanks to its shape, reduces the risk of the
baby rolling from back to tummy, lowering the risk of Sudden Infant Death
Syndrome (SIDS).",
    isbn="978-3-030-36150-1"
}

@article{Lee2018,
    title = "Design and Implementation of Monitoring System Architecture for
Smart Bicycle Platform",
    journal = "Procedia Computer Science",
    volume = "134",
    pages = "464--469",
    year = "2018",
    note = "The 15th International Conference on Mobile Systems and
Pervasive Computing (MobiSPC 2018) / The 13th International Conference on
Future Networks and Communications (FNC-2018) / Affiliated Workshops",
    issn = "1877-0509",
    doi = "https://doi.org/10.1016/j.procs.2018.07.182",
    url =
"http://www.sciencedirect.com/science/article/pii/S1877050918311475",
    author = "YeongKyun Lee and Jongpil Jeong",
    keywords = "Remote monitoring, Wireless sensor network, Smart phone
based monitoring, Bicycle monitoring",
    abstract = "This paper proposes the smart phone as a central monitoring
device for the bicycle and the WIFI network as a communication channel
between the smart phone and the sensors. It will show how to implement the
sensor boards with WIFI and relevant firmware, the software on the smart
phone to communicate with the sensor boards and the evaluation results with
the open source software called Goldencheetah. The knowledge in this paper
is not limited to bicycles but can be expanded to any other monitoring
systems using the remote sensors based on smart phone."
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}

@article{Ranjith2020,
    title = "Prediction of Exhaust Gas Emission characteristics using Neem
oil blended bio-diesel in diesel engine",
    journal = "Materials Today: Proceedings",
    volume = "21",
    pages = "870 - 875",
    year = "2020",
    note = "International Conference on Recent Trends in Nanomaterials for
Energy, Environmental and Engineering Applications",
    issn = "2214-7853",
    doi = "https://doi.org/10.1016/j.matpr.2019.07.706",
    url =
"http://www.sciencedirect.com/science/article/pii/S2214785319329116",
    author = " Ranjith and V. Velmurugan and S. Thanikaikarasan",
    keywords = "Accelerometer, Diesel engine, Neem oil, Renewable,
Alternative, Viscosity, Volatility",
    abstract = "As a renewable, sustainable and alternative fuel for diesel
engine, biodiesel instead of diesel has been increasingly fuelled to study
its effects on engine performances and emissions. Biodiesel production is a
modern and technological area for researchers due to constant increase in
the prices of petroleum, diesel, and environmental advantages. Increased
environmental awareness and depletion of resources are driving industry to
develop viable alternative fuels from renewable resources that are
environmentally more acceptable. Neem oil is a potential alternative fuel.
The most detrimental properties of neem oils are its high viscosity and low
volatility, and these cause several problems during their long duration
usage in diesel engines. From the review it is found that the use of
biodiesel leads to the substantial reduction in CO2, HC, CO and NOx
emissions."
}

@article{Sobhani2018,
    title = "Impact of smartphone distraction on pedestrians crossing
behaviour: An application of head-mounted immersive virtual reality",
    journal = "Transportation Research Part F: Traffic Psychology and
Behaviour",
    volume = "58",
    pages = "228 - 241",
    year = "2018",
    issn = "1369-8478",
    doi = "https://doi.org/10.1016/j.trf.2018.06.020",
    url =
"http://www.sciencedirect.com/science/article/pii/S1369847818300998",
    author = "Anae Sobhani and Bilal Farooq",
    keywords = "Head-mounted immersive virtual reality, Pedestrian,
Distracted street crossing, Multi-tasking, Smartphone use, Surrogate
analysis, Smart LED lights safety treatment",
    abstract = "A novel head-mounted virtual immersive/interactive reality
environment (VIRE) is utilized to evaluate the behaviour of participants in
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three pedestrian road crossing conditions while 1) not distracted, 2)
distracted with a smartphone, and 3) distracted with a smartphone with a
virtually implemented safety measure on the road. Forty-two volunteers
participated in our research who completed thirty successful (complete
crossing) trials in blocks of ten trials for each crossing condition. For
the two distracted conditions, pedestrians are engaged in a maze-solving
game on a virtual smartphone, while at the same time checking the traffic
for a safe crossing gap. For the proposed safety measure, smart flashing and
color changing LED lights are simulated on the crosswalk to warn the
distracted pedestrian who initiates crossing. Surrogate safety measures as
well as speed information and distraction attributes such as direction and
orientation of participants head were collected and evaluated by employing a
Multinomial Logit (MNL) model. Results from the model indicate that females
have more dangerous crossing behaviour especially in distracted conditions;
however, the smart LED treatment reduces this negative impact. Moreover, the
number of times and the percentage of duration the head was facing the
smartphone during a trial and a waiting time respectively increase the
possibility of unsafe crossings; though, the proposed treatment reduces the
safety crossing rate. Hence, our study shows that the smart LED light safety
treatment indeed improves the safety of distracted pedestrians and enhances
the successful crossing rate."
}

@article{Obayashi2020,
    title = "Pilot and Feasibility Study on Elderly Support Services Using
Communicative Robots and Monitoring Sensors Integrated With Cloud Robotics",
    journal = "Clinical Therapeutics",
    year = "2020",
    issn = "0149-2918",
    doi = "https://doi.org/10.1016/j.clinthera.2020.01.001",
    url =
"http://www.sciencedirect.com/science/article/pii/S0149291820300278",
    author = "Kazuko Obayashi and Shigeru Masuyama",
    keywords = "activities of daily living, cloud robotics, communicative
robot, elderly care, robotics utilization, support services",
    abstract = "Purpose
    This pilot before-after study investigated the possible effects of
communicative robots, used with a sensing system supported by cloud
robotics, in caring for elderly people.
    Methods
    Two elderly women in nursing homes and 4 care workers participated in
the trial. The overnight life rhythm assessments of the study participants
and care workers were surveyed to determine when and how the robots should
be integrated into care. The system consisted of the robot Sota, a
noncontact vital sensor and a sheet-shaped bed sensor. Real-time sensing
data and conversations between the participants and robots were sent to the
servers, prompting a quick verbal response by the robot supported by cloud
robotics.
    Findings
    Care workers devoted 3 h to the maintenance of records during their most
stressful periods. Automatic recording of vital information using robot
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sensors can improve the quality of nursing care work. Care workers' stress levels were maximized when responding to nurse calls. Temporary responses to nurse calls by the robots may help to effectively reduce the burden on nursing care workers. Robots can stimulate elderly people to communicate more with others (P < 0.05). Appropriate vocalization by communicative robots may prevent the deterioration of quality of life in elderly individuals.
    Implications
    Communicative robots, used with a sensing system, may stimulate elderly people to activate a communication link with others and help care workers to effectively reduce the burden during the night shift. A follow-up study involving a broader research program on communicative robots and elderly care would be beneficial."
}

@article{Thapa2019,
    title = "Study on the wintry thermal improvement of makeshift shelters built after Nepal earthquake 2015",
    journal = "Energy and Buildings",
    volume = "199",
    pages = "62 - 71",
    year = "2019",
    issn = "0378-7788",
    doi = "https://doi.org/10.1016/j.enbuild.2019.06.031",
    url =
"http://www.sciencedirect.com/science/article/pii/S0378778819306309",
    author = "Rita Thapa and Hom Bahadur Rijal and Masanori Shukuya and Hikaru Imagawa",
    keywords = "Nepal, Earthquake, Temporary shelters, Indoor air temperature, Thermal insulation, Thermal improvement",
    abstract = "After massive earthquake 2015, thousands of Nepalese who lost their permanent houses by the hardest hits were forced to live in makeshift temporary shelters. The field measurement on indoor thermal environment in five shelters was conducted in one of the district hit by the earthquake, Lalitpur, in winter. The mean indoor and outdoor air temperatures during the measured nighttime were found to be 10.3 °C and 7.6 °C, respectively, and the nocturnal indoor air temperature remained below the lowest acceptable temperature of 11 °C. This result assured that these shelters are not good for winter and must create various problems. We therefore analyzed the thermal characteristics of those shelters based on the measured results in order to seek a possible improvement. The total heat loss coefficient estimated per floor area in five shelters ranged from 11.3 to 15.2 W/(m2·K); that is thermal insulation was very low. We made a simple numerical analysis on the variation of indoor air temperature with the assumption of improved thermal characteristics and thereby found that it needs to be reduced about 2~7 W/(m2·K) to have the indoor air temperature higher than 11 °C for 70\% of the whole nocturnal hours. Such reduction of heat loss was found to be realized by adding affordable materials, e.g., cellular polyethylene foam and clothes for respective walls and roof. Thus, the knowledge obtained from this study should hopefully be applied to actual improvement of indoor thermal environment in existing shelters and also to a
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development for the preparation against future disaster."
}

@MISC{gartner2021,
  author  = "{Gartner}",
  title   = "{Gartner Magic Quadrant for Data Science and Machine Learning
Platforms}",
  url     = "{https://www.gartner.com/en/documents/3998753}",
  urldate = "{March 2021}",
  year    = "{2021}",
  address = "{[Accessed in April 2021]}",
}

@MISC{android41,
  author  = "{Android Open Source Project}",
  title   = "{Android Developers: Android 4.1 APIs}",
  url     =
"{http://developer.android.com/about/versions/android-4.1.html}",
  urldate = "{May 2014}",
  year    = "{2014}",
  address = "{[Accessed in April 2017]}",
}

@MISC{cloudexpo2008,
  AUTHOR  = "{Cloud Expo}",
  title   = "{Twenty-One Experts Define Cloud Computing}",
  url     = "{http://cloudcomputing.sys-con.com/node/612375}",
  urldate = "{October 2013}",
  year    = "{2008}",
  address = "{[Accessed in April 2021]}",
}

@BOOK{Bandyopadhyay2013,
  title={Unsupervised Classification: Similarity Measures, Classical and
Metaheuristic Approaches, and Applications},
  author={Bandyopadhyay, Sanghamitra and Saha, Sriparna},
  year={2013},
  isbn={978-3-642-32450-5},
  publisher={Springer},
  address = {Berlin, Germany},
  doi = {10.1007/978-3-642-32451-2}
}


@ARTICLE{Llorente2009,
  author  ="{Sotomayor, B. and Montero, Ruben S. and Llorente, I.M. and
Foster, I.}",
  journal ="Internet Computing, IEEE",
  title   ="{Virtual Infrastructure Management in Private and Hybrid
Clouds}",
  year    ="{2009}",
```

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  month   ="{Sept}",
  volume  ="{13}",
  number  ="{5}",
  pages   ="{14-22}",
  abstract = {One of the many definitions of "cloud" is that of an
infrastructure-as-a-service (IaaS) system, in which IT infrastructure is
deployed in a provider's data center as virtual machines. With IaaS clouds'
growing popularity, tools and technologies are emerging that can transform
an organization's existing infrastructure into a private or hybrid cloud.
OpenNebula is an open source, virtual infrastructure manager that deploys
virtualized services on both a local pool of resources and external IaaS
clouds. Haizea, a resource lease manager, can act as a scheduling back end
for OpenNebula, providing features not found in other cloud software or
virtualization-based data center management software.},
  doi = {10.1109/MIC.2009.119}
}

@article{Mulder2013,
    title = "Development of a Motion System for an Advanced Sailing
Simulator ",
    journal = "Procedia Engineering",
    volume = "60",
    number = "0",
    pages = "428 - 434",
    year = "2013",
    note = "6th Asia-Pacific Congress on Sports Technology (APCST) ",
    issn = "1877-7058",
    doi = "http://dx.doi.org/10.1016/j.proeng.2013.07.030",
    url =
"http://www.sciencedirect.com/science/article/pii/S1877705813010813",
    author = "Fabian A. Mulder and Jouke C. Verlinden",
    keywords = "Sailing",
    keywords = "Dinghy",
    keywords = "Virtual reality",
    keywords = "Training simulation",
    keywords = "Force feedback",
    abstract = "Abstract To train competitive sailing in a virtual setting,
motion of the boat as well as haptic feedback of the sail lines is
essential. When discussing virtual environments (VEs) the concept of
presence is often used. In this study we develop a sailing simulator motion
system to research what factors contribute to the participants’ sensation of
presence when sailing in a VE. The developed simulator includes the
development of a mainsheet force feedback system and a novel motion
platform, connected to a high-quality graphics sailing simulation. In future
research, the developed system will be used to study which sail training
type can be performed in simulated environments, and if the system can be
used as a valid testbed for perception-action experiments."
}

@article{Mahn2006,
title = {A BEHAVIOUR-BASED NAVIGATION SYSTEM FOR AN AUTONOMOUS INDOOR
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BLIMP},
journal = {IFAC Proceedings Volumes},
volume = {39},
number = {16},
pages = {837-842},
year = {2006},
note = {4th IFAC Symposium on Mechatronic Systems},
issn = {1474-6670},
doi = {https://doi.org/10.3182/20060912-3-DE-2911.00144},
url = {https://www.sciencedirect.com/science/article/pii/S1474667015342725},
author = {Manuel Mahn and Markus Kemper},
keywords = {control, indoor navigation},
abstract = {This paper describes a behaviour-based navigation system for
airborne autonomous robots. The work has been validated by controlling an
indoor blimp with a finite-state machine. It is shown that behaviour-based
navigation, especially concerning mobile robots for indoor applications, is
predestined to perform reconnaissance of unknown areas and moreover for
navigation tasks in familiar environment. Due to the inability of most
autonomous indoor aerial vehicles to carry heavy sensors, these systems lack
of metrical information and therefore the explicit localization is yet
impossible until today. The behaviour-based navigation is combined with a
variety of path-planning methods (tree-search, potential fields, etc.) using
obstacle-maps of known surroundings enabling the robot to acquire a desired
position in a correspondent cluster of rooms.}
}

@INPROCEEDINGS{Khan2018,
  author={Khan, Tareq},
  booktitle={2018 IEEE International Conference on Electro/Information
Technology (EIT)},
  title={A Smart Wearable Gadget for Noninvasive Detection and Notification
of Diaper Moister},
  year={2018},
  volume={},
  number={},
  pages={0240-0244},
  abstract={Wearing a wet diaper for a long time can be uncomfortable and
cause health issues such as diaper rash. The best way to avoid diaper rash
is to change the diaper often and as soon as possible after the baby
urinates or passes stool. Daycare caregivers or parents sometimes forget or
do not have time to manually check the diaper condition of the babies
throughout the day. In this age of smart devices, many people are busy with
their cell phones or tablets for social networking, texting, gaming, music
etc. In this project, a novel wearable gadget is developed which sends an
automatic notification to caregivers smart devices whenever the baby
urinates. The proposed wearable detects urination event noninvasively by
sensing the temperature rise on the outer surface of the diaper. The gadget
is a small size, low power, low cost and reusable electronic device that is
attached externally to the outer surface of the diaper using hook-and-Ioop
fasteners. The gadget can be used with any disposable diaper, thus no change
in the diaper production process or price increase is required. The
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smartphone app logs the urination events and creates databases and reports.
This record can facilitate treating disease such as dehydration, where
accurate previous records of urination are required. A prototype of the
hardware gadget and a smartphone app is developed and tested.},
  keywords={},
  doi={10.1109/EIT.2018.8500233},
  ISSN={2154-0373},
  month={May},
}

@INPROCEEDINGS{Nassiraei2006,
  author={Nassiraei, Amir A.F. and Masakado, Seiji and Matsuo, Takayuki and
Sonoda, Takashi and Takahira, Isao and Fukushima, Hajime and Murata,
Masayuki and Ichikawa, Koudai and Ishii, Kazuo and Miki, Tsutomu},
  booktitle={2006 IEEE/RSJ International Conference on Intelligent Robots
and Systems},
  title={Development of an Artistic Robot "Jumping Joe"},
  year={2006},
  volume={},
  number={},
  pages={1720-1725},
  abstract={In this paper, we describe the design, modeling, simulation and
implementation of an entertainment robot named "Jumping Joe". Jumping Joe,
an artistic and agile robot, can perform several rapid movements such as
fast wake up, jumping and somersault. In order to realize acrobatic
movements, four different actuators which can create the high-speed
movements are developed. Jumping Joe with eight DOF, which are two DOF in
each hip joint and one DOF in each knee joint and each foot, can also
perform the routine movements of a legged robot such as standing, walking
etc. First we describe the principle of the developed actuators. Second we
investigate the feasibility of the special movements performed by our
artistic robot through simulations using 3D dynamical analysis software.
Next we show experimentally that a prototype of our artistic robot "Jumping
Joe" can demonstrate all the above rapid movements.},
  keywords={Robots;Actuators;Legged locomotion;Hip;Knee;Foot;Analytical
models;Performance analysis;Software performance;Software
prototyping;Artistic Robot;Jumping;Somersault;Parallel Mechanism;Jumping
Joe},
  doi={10.1109/IROS.2006.282131},
  ISSN={2153-0866},
  month={Oct}
  }

@ARTICLE{Kuo2015,
AUTHOR={Kuo, Ming },
TITLE={How might contact with nature promote human health? Promising
mechanisms and a possible central pathway},
JOURNAL={Frontiers in Psychology},
VOLUME={6},
YEAR={2015},
URL={https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.
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2015.01093},
DOI={10.3389/fpsyg.2015.01093},
ISSN={1664-1078},
ABSTRACT={<p>How might contact with nature promote human health? Myriad
studies have linked the two; at this time the task of identifying the
mechanisms underlying this link is paramount. This article offers: (1) a
compilation of plausible pathways between nature and health; (2) criteria
for identifying a possible central pathway; and (3) one promising candidate
for a central pathway. The 21 pathways identified here include environmental
factors, physiological and psychological states, and behaviors or
conditions, each of which has been empirically tied to nature and has
implications for specific physical and mental health outcomes. While each is
likely to contribute to nature's impacts on health to some degree and under
some circumstances, this paper explores the possibility of a central pathway
by proposing criteria for identifying such a pathway and illustrating their
use. A particular pathway is more likely to be central if it can account for
the size of nature's impacts on health, account for nature's specific health
outcomes, and subsume other pathways. By these criteria, <italic>enhanced
immune functioning</italic> emerges as one promising candidate for a central
pathway between nature and health. There may be others.</p>}}

@article{Frumkin2017,
author = {Howard Frumkin  and Gregory N. Bratman  and Sara Jo Breslow  and
Bobby Cochran  and Peter H. Kahn Jr  and Joshua J. Lawler  and Phillip S.
Levin  and Pooja S. Tandon  and Usha Varanasi  and Kathleen L. Wolf  and
Spencer A. Wood },
title = {Nature Contact and Human Health: A Research Agenda},
journal = {Environmental Health Perspectives},
volume = {125},
number = {7},
pages = {075001},
year = {2017},
doi = {10.1289/EHP1663},

URL = {https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP1663},
eprint = {https://ehp.niehs.nih.gov/doi/pdf/10.1289/EHP1663}

}

@article{Kaplan1995,
title = {The restorative benefits of nature: Toward an integrative
framework},
journal = {Journal of Environmental Psychology},
volume = {15},
number = {3},
pages = {169-182},
year = {1995},
note = {Green Psychology},
issn = {0272-4944},
doi = {https://doi.org/10.1016/0272-4944(95)90001-2},
url = {https://www.sciencedirect.com/science/article/pii/0272494495900012},
```

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author = {Stephen Kaplan},
abstract = {Directed attention plays an important role in human information processing; its fatigue, in turn, has far-reaching consequences. Attention Restoration Theory provides an analysis of the kinds of experiences that lead to recovery from such fatigue. Natural environments turn out to be particularly rich in the characteristics necessary for restorative experiences. An integrative framework is proposed that places both directed attention and stress in the larger context of human-environment relationships.}
}

@ARTICLE{Stenfors2019,

AUTHOR={Stenfors, Cecilia U. D.  and Van Hedger, Stephen C.  and Schertz, Kathryn E.  and Meyer, Francisco A. C.  and Smith, Karen E. L.  and Norman, Greg J.  and Bourrier, Stefan C.  and Enns, James T.  and Kardan, Omid  and Jonides, John  and Berman, Marc G. },

TITLE={Positive Effects of Nature on Cognitive Performance Across Multiple Experiments: Test Order but Not Affect Modulates the Cognitive Effects},

JOURNAL={Frontiers in Psychology},

VOLUME={10},

YEAR={2019},

URL={https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2019.01413},

DOI={10.3389/fpsyg.2019.01413},

ISSN={1664-1078},

ABSTRACT={<p>Interactions with natural environments and nature-related stimuli have been found to be beneficial to cognitive performance, in particular on executive cognitive tasks with high demands on directed attention processes. However, results vary across different studies. The aim of the present paper was to evaluate the effects of nature vs. urban environments on cognitive performance across all of our published and new/unpublished studies testing the effects of different interactions with nature vs. urban/built control environments, on an executive-functioning test with high demands on directed attention—the backwards digit span (BDS) task. Specific aims in this study were to: (1) evaluate the effect of nature vs. urban environment interactions on BDS across different exposure types (e.g., real-world vs. artificial environments/stimuli); (2) disentangle the effects of testing order (i.e., effects caused by the order in which experimental conditions are administered) from the effects of the environment interactions, and (3) test the (mediating) role of affective changes on BDS performance. To this end, data from 13 experiments are presented, and pooled data-analyses are performed. Results from the pooled
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data-analyses (<italic>N</italic> = 528 participants) showed significant
time-by-environment interactions with beneficial effects of nature compared
to urban environments on BDS performance. There were also clear interactions
with the order in which environment conditions were tested. Specifically,
there were practice effects across environment conditions in first sessions.
Importantly, after parceling out initial practice effects, the positive
effects of nature compared to urban interactions on BDS performance were
magnified. Changes in positive or negative affect did not mediate the
beneficial effects of nature on BDS performance. These results are discussed
in relation to the findings of other studies identified in the literature.
Uncontrolled and confounding order effects (i.e., effects due to the order
of experimental conditions, rather than the treatment conditions) may
explain some of the inconsistent findings across studies in the literature
on nature effects on cognitive performance. In all, these results highlight
the robustness of the effects of natural environments on cognition,
particularly when confounding order effects have been considered, and
provide a more nuanced account of when a nature intervention will be most
effective.</p>}}

@article{
Ulrich1984,
author = {Roger S. Ulrich },
title = {View Through a Window May Influence Recovery from Surgery},
journal = {Science},
volume = {224},
number = {4647},
pages = {420-421},
year = {1984},
doi = {10.1126/science.6143402},
URL = {https://www.science.org/doi/abs/10.1126/science.6143402},
eprint = {https://www.science.org/doi/pdf/10.1126/science.6143402},
abstract = {Records on recovery after cholecystectomy of patients in a
suburban Pennsylvania hospital between 1972 and 1981 were examined to
determine whether assignment to a room with a window view of a natural
setting might have restorative influences. Twenty-three surgical patients
assigned to rooms with windows looking out on a natural scene had shorter
postoperative hospital stays, received fewer negative evaluative comments in
nurses' notes, and took fewer potent analgesics than 23 matched patients in
similar rooms with windows facing a brick building wall.}}

@article{McMahan2015,
author = {Ethan A. McMahan and David Estes and},
title = {The effect of contact with natural environments on positive and
negative affect: A meta-analysis},
journal = {The Journal of Positive Psychology},
volume = {10},
number = {6},
pages = {507--519},
year = {2015},
publisher = {Routledge},
doi = {10.1080/17439760.2014.994224},
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URL = {

        https://doi.org/10.1080/17439760.2014.994224



},
eprint = {

        https://doi.org/10.1080/17439760.2014.994224



}
,
    abstract = { A growing body of empirical research suggests that brief contact with natural environments improves emotional well-being. The current study synthesizes this body of research using meta-analytic techniques and assesses the mean effect size of exposure to natural environments on both positive and negative affect. Thirty-two studies with a total of 2356 participants were included. Across these studies, exposure to natural environments was associated with a moderate increase in positive affect and a smaller, yet consistent, decrease in negative affect relative to comparison conditions. Significant heterogeneity was found for the effect of nature on positive affect, and type of emotion assessment, type of exposure to nature, location of study, and mean age of sample were found to moderate this effect. The implications of these findings for existing theory and research are discussed, with particular emphasis placed on potential avenues for fruitful future research examining the effects of nature on well-being.
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@article{Lisberg2009,
   author = {Lisberg Jensen, Ebba},
   institution = {Malmö högskola, Department of Urban Studies (US)},
   journal = {Our schools, our selves},
   number = {1},
   pages = {129--134},
   publisher = {The Canadian Centre for Policy Alternatives},
   title = {To Know is to Cherish? Learning from Swedish Environmental Education},
   volume = {19},
   keywords = {environmental education, species, Linneaus, Sweden, environment},
   abstract = {I denna artikel diskuteras den svenska utomhuspedagogiska traditionen, Linnés arv av att artbestämma, samla in och katalogisera växter och dessa företeelsers eventuella betydelse för ungdomars miljöengagemang och känsla för den hållbara utvecklingen. },
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{http://findarticles.com/p/articles/mi_7688/is_200910/ai_n42854669/?tag=cont
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@ARTICLE{Kuo2019,

AUTHOR={Kuo, Ming  and Barnes, Michael  and Jordan, Catherine },

TITLE={Do Experiences With Nature Promote Learning? Converging Evidence of a
Cause-and-Effect Relationship},

JOURNAL={Frontiers in Psychology},

VOLUME={10},

YEAR={2019},

URL={https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.
2019.00305},

DOI={10.3389/fpsyg.2019.00305},

ISSN={1664-1078},

ABSTRACT={<p>Do experiences with nature – from wilderness backpacking to
plants in a preschool, to a wetland lesson on frogs–promote learning? Until
recently, claims outstripped evidence on this question. But the field has
matured, not only substantiating previously unwarranted claims but deepening
our understanding of the cause-and-effect relationship between nature and
learning. Hundreds of studies now bear on this question, and converging
evidence strongly suggests that experiences of nature boost academic
learning, personal development, and environmental stewardship. This brief
integrative review summarizes recent advances and the current state of our
understanding. The research on personal development and environmental
stewardship is compelling although not quantitative. Report after report –
from independent observers as well as participants themselves – indicate
shifts in perseverance, problem solving, critical thinking, leadership,
teamwork, and resilience. Similarly, over fifty studies point to nature
playing a key role in the development of pro-environmental behavior,
particularly by fostering an emotional connection to nature. In academic
contexts, nature-based instruction outperforms traditional instruction. The
evidence here is particularly strong, including experimental evidence;
evidence across a wide range of samples and instructional approaches;
outcomes such as standardized test scores and graduation rates; and evidence
for specific explanatory mechanisms and active ingredients. Nature may
promote learning by improving learners’ attention, levels of stress, self-
discipline, interest and enjoyment in learning, and physical activity and
fitness. Nature also appears to provide a calmer, quieter, safer context for
learning; a warmer, more cooperative context for learning; and a combination
of “loose parts” and autonomy that fosters developmentally beneficial forms
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of play. It is time to take nature seriously as a resource for learning – particularly for students not effectively reached by traditional instruction.</p>}}

@Article{Kompier2006,
  author =    "Kompier, Michiel AJ",
  title =     "New systems of work organization and workers' health",
  journal =   "Scandinavian Journal of Work, Environment & Health",
  year =  "2006",
  month =     "Dec",
  day =    "32",
  number =    "6",
  pages =     "421--430",
  keywords =  "changing world of work; new organizational practice; new system; review; work characteristic; work organization; workers' health",
  abstract =  "<p>This paper aims at identifying major changes in and around work organizations, their effects upon job characteristics and the health and well-being of today's employees, and related research challenges. Increased internationalization and competition, increased utilization of information and communication technology, the changing workforce configuration, and flexibility and new organizational practices are considered. As work has changed from physical to mental in nature, job characteristics have changed significantly. Meanwhile work and family life have blended. New systems of work organization have become more prevalent, but they do not represent a radical change across the whole economy. New practices may have an adverse impact upon job characteristics, but their effects depend on their design, implementation, and management. Research recommendations include improved monitoring of changes in work organization and studies into their health and safety consequences, intervention studies, studies into the motivating potential of modern work practices, studies of marginalized workers and workers in less developed countries, and "mechanism studies".</p>",
  issn =  "0355-3140",
  doi =   "10.5271/sjweh.1048",
  url =   "https://www.sjweh.fi/show_abstract.php?abstract_id=1048",
  url =    "https://doi.org/10.5271/sjweh.1048"
}

@ARTICLE{Peterson2021,

AUTHOR={Petersson Troije, Charlotte  and Lisberg Jensen, Ebba  and Stenfors, Cecilia  and Bodin Danielsson, Christina  and Hoff, Eva  and Mårtensson, Fredrika  and Toivanen, Susanna },

TITLE={Outdoor Office Work – An Interactive Research Project Showing the Way Out},

JOURNAL={Frontiers in Psychology},

VOLUME={12},
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YEAR={2021},

URL={https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.636091},

DOI={10.3389/fpsyg.2021.636091},

ISSN={1664-1078},

ABSTRACT={<p>The physical boundaries of office work have become increasingly flexible. Work is conducted at multiple locations outside the office, such as at clients' premises, at home, in cafés, or when traveling. However, the boundary between indoor and outdoor environment seems to be strong and normative regarding how office work is performed. The aim of this study was to explore how office work may be conducted outdoors, understanding how it is being experienced by office employees and identifying its contextual preconditions. Based on a two-year interactive research project, the study was conducted together with a Swedish municipality. Fifty-eight participants engaged in the collaborative learning process, including 40 half-day workshops and reflective group discussions, co-interviews, and participants' independent experimentation of bringing work activities outdoors. Data was collected via interviews, group discussions and a custom-made mobile application. The results showed that a wide range of work activities could be done outdoors, both individually and in collaboration with others. Outdoor work activities were associated with many positive experiences by contributing to a sense of well-being, recovery, autonomy, enhanced cognition, better communication, and social relations, but also with feelings of guilt and illegitimacy. Conditions of importance for outdoor office work to happen and function well were found in the physical environment, where proximity to urban greenspaces stood out as important, but also in the sociocultural and organizational domains. Of crucial importance was managers' attitudes, as well as the overall organizational culture on this idea of bringing office work outdoors. To conclude, if working life is to benefit from outdoor office work, leaders, urban planners and policymakers need to collaborate and show the way out.</p>}}

@MISC{Crook2020,
  author  = "{Crook}",
  title   = "{Powerhouse Company reveals floating off-grid office in Rotterdam}",
  url     = "{https://www.dezeen.com/2020/02/04/powerhouse-company-sustainable-floating-office-rotterdam/}",
  urldate = "{}",
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@MISC{soofa2024,
  author  = "{Changing Environments, Inc.}",
  title   = "{Soofa}",
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@MISC{strawberrye2025,
  author  = "{Strawberry Energy}",
  title   = "{Smart Bench 1 symbolises the flow and transformation from
solar to electrical energy.}",
  url     = "{https://strawberrye.com/smart-bench-1/}",
  urldate = "{}",
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@MISC{kubee2024,
  author  = "{Kubee}",
  title   = "{Phone charging and free wifi
on the solar powered smartbenches}",
  url     = "{https://kuube.hu/en/}",
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  year    = "{2024}",
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@MISC{amai2021,
  author  = "{Dirk Wynants for Extremis}",
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  url     = "{https://www.extremis.com/en/collections/amai/amai}",
  urldate = "{}",
  year    = "{2021}",
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@MISC{eps2023_t1,
  author  = "{EPS 2023 - Amplea}",
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  url     = "{https://www.eps2023-
wiki1.dee.isep.ipp.pt/doku.php?id=report}",
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@MISC{eps2021_t3,
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  title   = "{Ergonomic Reconfigurable Home-Desk}",
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wiki3.dee.isep.ipp.pt/doku.php?id=report}",
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  year    = "{2021}",
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@MISC{Guevara2024,
  author  = "{Patricia Guevara}",
  title   = "{A Guide to Understanding 5x5 Risk Assessment Matrix}",
  url     =
"{https://safetyculture.com/topics/risk-assessment/5x5-risk-matrix/}",
  urldate = "{}",
  year    = "{2024}",
  address = "{}",
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@MISC{sixsigma2024,
  author  = "{SixSigma.us}",
  title   = "{Your Guide to Stakeholder Analysis Matrix: Master Project
Management}",
  url     =
"{https://www.6sigma.us/project-management/stakeholder-analysis-matrix/}",
  urldate = "{}",
  year    = "{2024}",
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@misc{EU2014_35,
title = {Directive 2014/35/EU on Low Voltage},
howpublished = {Official Journal of the European Union L96},
year = {2014},
note = {Accessed 5 June 2025}
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@misc{EU2014_30,
title = {Directive 2014/30/EU on Electromagnetic Compatibility},
howpublished = {Official Journal of the European Union L96},
year = {2014},
note = {Accessed 5 June 2025}
}

@misc{EU2014_53,
title = {Directive 2014/53/EU on Radio Equipment},
howpublished = {Official Journal of the European Union L153},
year = {2014},
note = {Accessed 5 June 2025}
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@misc{EU2011_65,
title = {Directive 2011/65/EU (RoHS II)},
howpublished = {Official Journal of the European Union L174},
year = {2011},
note = {Accessed 5 June 2025}
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@misc{EU2001_95,
title = {Directive 2001/95/EC on General Product Safety},
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year = {2001},
note = {Accessed 5 June 2025}
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@misc{EU2019_771,
title = {Directive (EU) 2019/771 on the Sale of Goods},
howpublished = {Official Journal of the European Union L136},
year = {2019},
note = {Accessed 5 June 2025}
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@misc{ETSI303645,
title = {{ETSI EN 303 645}: Cybersecurity for Consumer IoT},
howpublished = {European Telecommunications Standards Institute},
year = {2024},
note = {Accessed 5 June 2025}
}

@MISC{ShinrinYoku,
    title = "{Shinrin-yoku --- {Wikipedia}{,} The Free Encyclopedia}",
    url = "{https://en.wikipedia.org/w/index.php?title=Shinrin-
yoku&oldid=1295177120}",
    year = "{2025}",
  }
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