

Lukáš Hejtmánek

PhD in neurosciences, programmer, data analyst, lecturer

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EDUCATION

CHARLES UNIVERSITY

PHD IN NEUROSCIENCES

VIRTUAL ENVIRONMENTS AS A TOOL TO
STUDY HUMAN NAVIGATION
2015 - 2020 | Prague, CZ

MCGILL UNIVERSITY

EXCHANGE VISIT

February - April 2013 | Montreal, CA

CHARLES UNIVERSITY

MASTERS IN PSYCHOLOGY

2009 - 2015 | Prague, CZ

SKILLS

PROGRAMMING

Primary languages:

R • Python • C# • Matlab • Javascript

Frameworks:

Unity3D • Unreal Engine 4

Worked on projects in:

SQL • Ruby • C++

Other:

LaTeX

LANGUAGES

English C2 Fluent

French B2 Working knowledge

MISCELLANEOUS

• Leadership and professional skills
in psychiatry and neurology (2015,
NIMH, CZ)

HOBBIES

- Boardgames
- Photography
- Anything cyberpunk
- Cooking
- Motorcycles

RESEARCH EXPERIENCE

INSTITUTE OF PSYCHOLOGY CAS | PROGRAMMER

January 2019 - Present | Prague, CZ

Collaborating with **Mgr. Jiří Lukavský, Ph.D.** and **Mgr. Filip Děchtěrenko, Ph.D.** on studies involving eye-tracking, EEG, visual research and virtual reality. Programming VR experiments exploring multiple objects tracking and scene processing in Unreal Engine 4.

CENTER FOR NEUROSCIENCE, UC DAVIS | FULBRIGHT SCHOLAR

September 2017 - June 2018 | Davis, CA, USA

I received Fulbright scholarship to study human navigation in virtual reality with professor **Arne D. Ekstrom, Ph.D.** Designing and programming experiments to study transfer of spatial knowledge between real and virtual environments. Creating immersive VR experiences in Unity and setting up tracking in the real world using commercial bluetooth beacon solution based on iBeacon. Preprocessing and analysing behavioral data using R.

NATIONAL INSTITUTE OF MENTAL HEALTH | JUNIOR

RESEARCHER AND PROGRAMMER

January 2015 - | Klecany, CZ

Designing and programming virtual simulations for neuroscientific experiments with **Mgr. et Mgr., Iveta Fajnerová, Ph.D.** Working with SR 1000 and pupil labs eye-tracking and VR headsets. Analysing eye-tracking and behavioural data in R and Python.

INSTITUTE OF PHYSIOLOGY CAS | PHD DISSERTATION RESEARCH

Oct 2015 - Present | Prague, CZ

Dissertation research on virtual environments and human navigation with **Mgr. Kamil Vlček, Ph.D.** Designing navigation experiments in immersive 3D environments in Unity3D and Unreal Engine 4. Programming custom tools in Matlab/R/Python for analysing behavioural and neurological data from iEEG recording and creating hardware solutions for EEG and PC synchronisation.

LECTURING EXPERIENCE

CEBEX | R PROGRAMMING LECTURER

Dec 2018 - Present | Prague, CZ

Teaching programming and data science in R to international students.

The course contents varies from programming basics to statistical concepts, tidyverse, effective visualisations and reproducible science with knitr and/or shiny.

NOVÝ PORG | HIGH SCHOOL IB PSYCHOLOGY TEACHER

Sep 2015 - June 2018 | Prague, CZ

Teaching basics of psychology, neurosciences, statistics and research methodology to senior high school students. Preparing students for IB final exams. Supervising essays and research projects.