Richard CSAKY

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As a final year **PhD** candidate at **Oxford**, I have gained expertise in collecting, analyzing, and **decoding non-invasive brain** data using novel **deep learning** approaches. My background is in robotics and computer science, along with **3 years** of applied machine learning **experience** in **computer vision** and **language** processing. I have a particular interest in **speech** BCI applications and emerging **BCI technologies**.

EDUCATION

PhD in Machine Learning and Neuroscience
Secured $100,000 studentship.
Presented research at 3 international conferences.
Authored 2 full papers on novel machine learning methods for decoding brain activity.
Designed reading and inner speech experiments, conducting 30 EEG, MEG, MRI, OPM sessions.
Wrote over 10,000 lines of code in Python for data analysis, signal processing, and machine learning.
Led 5-person team in a hackathon with a BCI idea.
University of Oxford
2020 – 2023

M.S. Erasmus Semester (with scholarship)
Courses: Bioinformatics, BCI, Neural Networks
KU Leuven (Belgium)
2020

M.S. in Computer Science Engineering
Thesis: Open-domain Neural Dialogue Modelling
Awarded the National Excellence Scholarship.
Attended EEML (machine learning summer school).
Presented research at 6 conferences and meetups.
Budapest University of Technology (Hungary)
2018 – 2020

B.S. in Mechatronics Engineering
Thesis: Parking Spot Recognition and Visualization
Implemented molecular circuit simulation platform in C++, winning 2nd place at university conference.
Budapest University of Technology (Hungary)
2014 – 2018

SOFT SKILLS

- Cross-disciplinary
- Leadership
- Adaptable
- Problem-solving

EXPERIENCE

Neuroscientist
BCI Stealth Startup
July 2022 – present

Natural Language Processing Researcher
1. Led dialog modelling research, publishing a novel data-filtering method at ACL, and winning a national competition with a review of 150 papers
2. Developed one of the first Transformer-based chatbots, with over 400 stars on GitHub
3. Created and published a new dataset at EACL
4. Developed online GPT2 chatbot used by 100s
5. Mentored students on NLP projects (1, 2, 3, 4)
6. Authored actively used NLP Python packages with 10-100 stars on GitHub (1, 2, 3)

Budapest University of Technology (Hungary)
February 2018 – October 2019

Software Engineer
Built a UI for real-time manipulation of parking spots on car camera feed, and collected and labelled 10,000 images. Adapted and trained YOLO for parking space segmentation, achieving results that led to the allocation of a dedicated team and additional funding for the project.
Bosch (Hungary)
July 2017 – August 2018

TECHNICAL SKILLS

Actively using
- EEG/MEG experiment design and execution
- Python, PyTorch
- Git
- LaTex
- Matlab

Studied and self-taught, used in projects
- Java/Android
- C/C++/C#
- OpenGL
- TensorFlow
- Processing
- Inventor, LabView, Ansys