

Bernard Spiegl

Helsinki, Finland

EDUCATION

Master of Science - Signal Processing and Data Science (GPA 4.7 / 5.0) <i>Aalto University</i> <ul style="list-style-type: none"> minors: Human Neuroscience and Technology; Acoustics and Audio Technology focus areas: Deep Learning, Neuroscience, Audio Signal Processing 	2021 — 2023 <i>Helsinki, Finland</i>
Bachelor of Science - Computer Science (GPA 3.8 / 5.0) <i>Faculty of Electrical Engineering and Computing, University of Zagreb</i> <ul style="list-style-type: none"> BSc thesis: Contrastive Unpaired Translation using Focal Loss for Patch Classification supervised by Prof. Siniša Šegvić arXiv preprint - [PDF] BSc project: Semi-Supervised Image Classification focus areas: Deep Learning, Computer Vision 	2018 — 2021 <i>Zagreb, Croatia</i>

ACHIEVEMENTS

HIIT Funding	Received funding from Helsinki Institute for Information Technology in a duration of 6 months for my master's thesis on novel view synthesis and mental rotation under supervision of Prof. Alexander Ilin co-supervised with Prof. Stéphane Deny.	2023
Dean's Incentive Scholarship	Received a scholarship awarded by Aalto University for good academic progress.	2022
Google Foobar	Received an invitation to Google's Foobar secret coding challenge.	2022
UNODC Youth Forum	Participated as a representative of Croatia at an international youth forum in Vienna, Austria organised by the United Nations Office on Drugs and Crime.	2018
STEM Scholarship	Received a scholarship for being among the top students on matriculation exam in fields of Mathematics and Physics.	2018

EXPERIENCE

TEACHING ASSISTANT <i>Aalto University</i> <ul style="list-style-type: none"> CS-E4890 - Deep Learning course. 	FEB 2023 — JUN 2023 <i>Helsinki, Finland</i>
RESEARCH ASSISTANT <i>Aalto University</i> <ul style="list-style-type: none"> Implemented a deep neural network architecture that combines VQ-VAE to compress the audio and an autoregressive transformer that operates on latent representations, generating a latent response, in an endeavor to simulate musical call and response interaction. Part of a research project on usage of AI in music and creative processes coordinated by Koray Tahiroğlu in collaboration with Google Brain (Magenta Team). 	APR 2022 — JUN 2022 <i>Helsinki, Finland</i>
DATA SCIENTIST INTERN <i>RealNetworks Inc.</i> <ul style="list-style-type: none"> Researched and tested multiple deep learning architectures for speech classification (robocall detection) and recognition using transformers (ViT) and various CNNs. 	JUL 2021 — AUG 2021 <i>Zagreb, Croatia</i>
SOFTWARE ENGINEERING INTERN <i>Koncar – Power Plant and Electric Traction Engineering Inc.</i> <ul style="list-style-type: none"> Developed a GUI client for network communication via Modbus protocol. Developed a web application for real time tracking and management of data on a SCADA based wind turbine systems. 	JUL 2019; JUL 2020 — AUG 2020 <i>Zagreb, Croatia</i>
UNDERGRADUATE TEACHING ASSISTANT <i>Faculty of Electrical Engineering and Computing, University of Zagreb</i> <ul style="list-style-type: none"> Assisted students during laboratory examinations in Fundamentals of Electrical Engineering course. 	FEB 2019 — JUL 2019 <i>Zagreb, Croatia</i>

OTHER SKILLS AND INTERESTS

Languages	Croatian (native), English (fluent - C2 (TOEFL iBT 114/120)), German (limited), Finnish (elementary), Italian (elementary)
Interests	Deep Learning, Neuroscience, Music Production and Sound Design, Guitar and Piano Playing, Sailing