Michal Adamkiewicz

Email: mikadam@stanford.edu Int. Tel: +48 697 064 060
US Tel: +1 (650) 690-0142 Date of Birth: 1998-08-21
Website: www.adamkiewi.cz

Education

Stanford University	Electrical Engineering BS (2016 - 2020) & MS (2021 - Current) GPAs: 3.91 & 3.94

Experience

Hollberg Lab	July 2022 - Current - Working on using fiber interferometers as distributed strain and temperature sensors for geophysics and climate applications. Developing tomography algorithms to localise disturbances from high speed optical phase noise
IPRL and MSL Labs	May 2021 - May 2022 - Worked towards using neural environment representations for robotic navigation, localisation and manipulation. Work published in RA-L and ICRA 2022. Paper and explanation video: https://mikh3x4.github.io/nerf-navigation/
Windborne Systems	July 2020 - March 2021 and Summer 2019 - First employee at climate data startup. Worked on flight hardware and designed manufacturing/launch tools and procedures. As the only engineer responsible for a balloon autolauncher robot, developed its mechanical, electrical and software design from scratch.
Reliable Robotics	Summer 2018 - Worked on flight software system for a crewed autonomous aircraft. Wrote system code that affected the entire system, prototyped the radio communication system and worked to characterise inertial measurement sensors
Nvidia	Summer 2017 - Interned in the fast kernels group as a deep Learning Architect, analysing performance and optimising Deep Learning kernels in assembly

Projects

Stanford Robotics Club	Club President - Completely restructured the club, overseeing 4 project teams, organising events, recruitment. Initiator and co-lead of Rover team that won 3rd place internationally and 1st in the US in the University Rover Challenge 2019 having designed and built an all terrain robot with a 6 axis manipulator.
Stanford Space Initiative	Community Manager of the student run club, worked on the embedded code of endurance record breaking high altitude balloon (Valbal). Over summer 2017 designed the mechanical structure of an optical communication cubesat
Teaching	Designed curriculum and taught a class focusing on mechatronic design and prototyping (EE64SI) to 20 students in winter 2023. ee64.stanford.edu
Processor Project	Designed from scratch and built an 8bit processor from ~700 discrete SMD transistors to teach myself digital design and experience old-school programming.
Software	Personal projects include a graph based lidar SLAM, a lightweight robotics communications library, game players for minesweeper and 2048, barebones OS on baremetal Raspberry Pi, an amateur liquid rocket monitoring interface
Hardware	Projects include: multiple robotic arms, 3D printers (RepRap and my own design), holonomic couch, telepresence robot, swarm robot integrated PCBs, pet gecko tank automation, cryogenic 3D printer (with Berkeley lab - patent pending)

Skills and Interests

Engineering	Solidworks and Autodesk Fusion 360 (including FEA simulations and CAM), AutoCAD, Design for 3D printing and laser/waterjet cutting, CNC machining; Digital Circuit and PCB design: Altium, KiCAD; Mechatronic system design
Maths	Intuitive and formal high level understandings of mathematics including vector calculus, linear algebra, probability, group theory, differential equations
Computer Science	Python (including popular external libraries: numpy, matplotlib and PyTorch), C/C++, ARM Assembly, Julia, Matlab. Comfortable with Linux, ROS, Git
Languages	English (Native), Polish (Native), French (B1/B2), Mandarin (HSK2/3)