

Agnieszka (Aga)
Czeszumka
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Highly-adaptable, curious PhD thriving in innovative technologies; experienced in systems engineering, product development and data science

Education

University of California, Berkeley 2016

PhD Nuclear Engineering

Concentration in Nuclear Physics with Nuclear Policy minor

University of California, Berkeley 2008

BA Physics, BA Astrophysics

Skills

Hardware Skills: sensor integration and calibration, signal acquisition and processing, system integration and testing, basic embedded firmware communication and programming, electronics (soldering, basic PCB design)

Computational Skills: Python, C++, embedded C, Matlab, Bash, LaTeX, HTML; statistical and numerical analysis, simulations (ROOT, Geant4)

Languages: Bilingual in English and Polish; Intermediate French; Elementary German (A2)

Experience

Science to Data Science Bootcamp, (online) London, UK 08/2021

Participated in a Data Science bootcamp. Completed a computer vision group project built in tensorflow.

Two Fingers, Berlin, Germany

08/2020 –
present

Adviser on Product Development

Mentored and contributed to product development of a menstrual cup cleaning device.

mitte mitte GmbH, Berlin, Germany

08/2019 –
04/2022

Senior System Engineer (Mechatronics)

Oversaw system architecture of a smart water filtration/mineralization/carbonation machine. Designed and performed test plans in support of product development, verification, validation, and optimization. Coordinated between hardware, firmware, and software teams. Built data analysis tools with Jupyter. Worked in an agile cross-functional team, utilizing Jira and Confluence tools. Managed interns.

Hearable Labs, Berlin, Germany

01/2019 –
06/2019

Software Engineer

Assembled and tested hearing aid prototype hardware.

Configured and optimized the device software running on Raspberry Pi. Developed testing protocols and analyzed

performance with Python and Octave. Contributed to product research and development. Developed embedded software for Arduino and XMC board peripherals.

**Research Center for Nuclear Physics, Osaka University,
Ibaraki, Osaka, Japan**

09/2016 –
03/2018

Postdoctoral Researcher

Tested, calibrated, and characterized data acquisition instruments used for signal processing of radiation sensor data. Developed and carried out testing protocols. Integrated data from multiple sensors to extract data of interest. Built basic electronic circuits for interfacing between hardware components. Worked with an international team. Trained students.

Lir Scientific, San Francisco, CA

08/2015 –
12/2015

Engineering Intern

Configured a microcontroller data logging system for a prototype of an embedded medical biosensor device used for bladder control. Built real-time analysis and visualization tools in Python to test the device. Developed device testing protocols.

**UC Berkeley Department of Nuclear Engineering/
Lawrence Livermore National Laboratory, Livermore, CA**

08/2009 –
08/2016

Lawrence Graduate Student Fellow

Spearheaded configuration and calibration of the experimental apparatus used for high-precision nuclear physics measurements, including installation and operation of various detectors, a radiofrequency (RF) ion trap, and an ultrahigh-vacuum system. Oversaw signal acquisition and processing, integration, and analysis of data. Received a Physics Division Spot Award in recognition of the efforts and won a Best Poster award at the ARIS 2014 conference.

Other
Experience

Nerd Nite Kansai, Osaka, Japan

11/2017 –
11/2018

Co-organizer

Helped organize the first Nerd Nite event (speaker series on science and technology) in the Kansai area. Coordinated the venue, speakers, and promotion.

Berkeley Student Cooperative, Berkeley, CA

08/2012 –
05/2013

Event Coordinator

Managed and coordinated events at a student housing cooperative with over 60 members. Ensured personal safety and compliance with city regulations. Communicated with overhead management. Organized and facilitated retreats.