Anna Dymchenko

408-204-8208 | adymchenko@berkeley.edu | LinkedIn

Education

University of California, Berkeley Berkeley, CA

B.S. in Electrical Engineering and Computer Science — GPA: 3.6/4.0 *June 2022 – May 2025*

Relevant Coursework: Data Structures and Algorithms, Discrete Mathematics and Probability Theory, Efficient Algorithms and Intractable Problems, Designing Information Devices and Systems, Great Ideas in Computer Architecture, Signals and Systems, Operating Systems and System Programming

Experience

Undergraduate Research Apprentice | *UC Berkeley* Sept. 2023 – Present

- Evaluated the performance of a Xilinx RFSoC board for the purposes of on-board processing of data from the MOLLER and CUPID particle physics experiments
- Revised and implemented the design of DSP algorithms in Verilog and Xilinx-provided synthesis tools, additionally developing a Python API for easy use and adjustment by other researchers

RF Software Engineering Intern | *SpaceX* May 2023 – Aug. 2023

- Developed a Python library for RF link budget analysis as a tool for evaluating flight readiness, incorporating a well-structured API which ensured accessibility for users without software backgrounds
- Collaborated with colleagues from electrical engineering and physics backgrounds, translating their requirements into functional software features and aiding them in creating their own scripts
- Acquired foundational knowledge of antenna physics and digital signal processing in real time, applying new insights to advance considerations for link analysis
- Performed both automated and manual harness and instrument testing in a lab setting, including interpreting manufacturers' documentation to write own hardware drivers

Academic Intern for CS61A | *UC Berkeley* Aug. 2022 – Dec. 2022

- Hosted weekly office hour sessions alongside other interns serving up to 30-40 students per session
- Debugged students' code and answered conceptual questions about Python and the fundamentals of programming

Projects

Flight Rising G1 Pinglist | *HTML, CSS, Javascript, SQL, Git* Nov. 2020 – Present

- Maintained opt-in advertising and sales platform serving over 3000 people, facilitating sales of in-game avatars and items worth up to $25,000
- Improved platform via a complete front-end overhaul, replacing deprecated spreadsheet with a dedicated website that provided better quality of life and kept user data secure
- Headed community management, including beta testing & implementation of requested features and data collection on community response

FPGA-Based Polar Coordinates Game | *Verilog* Feb. 2022

- Built a game at USC's AthenaHacks 2022, aimed at providing an interactive way for primary/secondary school students to learn about the polar coordinate system
- Designed and implemented the game quickly over the span of 24 hours, using less than $20 of components (low-cost FPGA, paddle controllers, display) to create engaging physical gameplay

Stellar Age Estimation using Machine Learning | *TensorFlow, Pandas, Matplotlib* Jan. 2023 – May 2023

- Designed and collaborated on a student-led machine learning project utilizing TensorFlow to create a predictive model for stellar age based on astrometry data sourced from GAIA DR3
- Employed Pandas and Matplotlib to collect, analyze, and visually represent project outcomes to meaningfully convey results to an audience with a wide variety of technical backgrounds

Technical Skills

Languages: Python, C, C++, Java, Verilog, Javascript, HTML, CSS, SQL
Developer Tools: Git, GitHub, Visual Studio Code, IntelliJ, Eclipse