

Anna Dymchenko

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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, Introduction to Machine Learning, Introduction to Digital Design and Integrated Circuits

EXPERIENCE

Undergraduate Research Apprentice | UC Berkeley

Sept. 2023 – Dec. 2023

- 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

RF 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

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

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

Low-Cost Radio Telescope | Python, SDRSharp, SolidWorks

June 2020 – June 2021

- Constructed horn antenna and telescope mount using under \$200 of materials in order to observe the 21 centimeter hydrogen line
- Utilised and contributed to Python script performing fast Fourier transform and other processing algorithms to amplify data signals
- Presented findings to San Jose Astronomical Association, including observation of the Sag A* region and the arms of the Milky Way

TECHNICAL SKILLS

Languages: Python, C, C++, Java, Verilog, Javascript, HTML, CSS, SQL

Developer Tools: Git, GitHub, Visual Studio Code, IntelliJ, Eclipse