Karthik Bhattaram

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Education

University of California, Santa Barbara — Santa Barbara
Bachelor of Science in Computer Science, Minor in Statistics — *Sep. 2022 to June 2026*

- Data Structures and Algorithms, Artificial Intelligence, Machine Learning for Networking, Computer Security

De Anza College - High School Dual Enrollment — Cupertino, CA
Certificate in Enterprise Security — *July. 2019 to Jun 2022*

- Network Security, UNIX/Linux, TCP/IP Protocol Suite, Ethical Hacking, Object–Oriented Programming in Java

Experience

Software Engineering Intern — July 2024 – Present
Cadence Design Systems — *Santa Fe, New Mexico*

- Wrote **AWS** based package to automate **data science** workflow
- Reduced **terabyte** scale molecule database size by **45%** using this package
- Optimized and updated pharmaceutical software written in **CUDA C++**

Internal Tools Intern — June 2023 – Sep. 2023
Cadence Design Systems — *San Jose, California*

- Developed **automation tool** to generate memory for hardware products
- Reduced manual effort by **90%**
- Wrote **test suite** to ensure the memory could be written to and read from accurately

Software Engineering Intern — Jun 2022 – Aug 2022
Axiado Corporation — *San Jose, California*

- Discovered **multiple bugs** in the company's chip by crafting custom network packets
- Maintained package developed the previous Summer and added user-requested features
- Developed a **test plan** leading up to the company's product release

Software Engineering Intern — Jun 2021 – Aug. 2021
Axiado Corporation — *San Jose, California*

- Wrote package to create network traffic based on desired protocols, such as TLS, ARP, and MACsec
- Created simulated malicious traffic to test the effectiveness of the company's product
- Published findings in the form of a **research paper**

Projects

Weather Predictor | *Pandas, Numpy, Argparse, Excel, Bash, Python* — March 2024 – May 2024

- Developer a weather predictor trained on Excel spreadsheets with historical weather data
- Used Numpy and Naive Bayes for prediction
- Achieved best-in-class 68.5% accuracy
- Wrote a Bash automation script to handle execution

Technical Skills

Languages: Java, Python, C/C++, Shell, JavaScript, HTML/CSS, Verilog
Frameworks: React, Flask, JUnit, FastAPI, Matplotlib
Developer Tools: Git, AWS, Visual Studio Code, Vim, Emacs
Libraries: Pandas, NumPy, CUDA, PyTest, Black