

Puloma Katiyar

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EXPERIENCE

Software Engineer

Aug. 2023 – Present

HP - Ink Supplies Security Firmware

Vancouver, WA

- Worked on a **large codebase** to develop security firmware for detection of counterfeit ink cartridges
- Significantly improved debugging by creating more informative device status report with previously untracked data
- Increased unit test coverage by 40% for multiple components by implementing new Google Test framework
- Fixed multiple regression bugs to correct telemetry data being overwritten during device to cloud communication
- **Technologies:** C++, GitHub, Docker containers, Linux, Google Test Framework, gdb, qemu

Software Engineer Intern

Jun. 2022 – Sep. 2022

Meta (Facebook) - Ads Products: Optimization

Menlo Park, CA

- As part of Ads Optimization team (impacts **40% Meta revenue**), developed new ads product that optimizes for deep funnel events using **machine learning**. Worked on end-to-end solution from custom **data pipelines** for model training to online serving in the **high performance distributed** ads delivery system.
- Automated performance analysis of ad campaigns for improved scalability
- **Technologies:** Presto, Hadoop/Hive, Dataswarm (like Airflow), Scuba (like Tableau), SQL, Python, Mercurial

STEP (Software Engineer) Intern

Jun. 2021 – Sep. 2021

Google - Commerce: Hotels Growth

Mountain View, CA

- Quickly learned Google's complex **distributed search** serving framework. Developed code to query data for an upcoming feature to provide a more immersive experience on the hotels search page.
- Added "About this Result" feature to Google's main hotels search results page. Ran experiment validation and launched feature. Feature used by **hundreds of millions of users**.
- **Technologies:** Java, Protobuf, HTML, JavaScript, Google Test Framework

Undergraduate Research Assistant

Jan. 2020 – Nov. 2020

Big Data Lab - UC Riverside

Riverside, CA

- Developed a **full-stack web application** to generate spatial datasets with user-configured parameters
- Built back-end generator with streaming to optimize generator for response time less than 1 sec for all queries, regardless of dataset size
- Published paper in ACM SIGSPATIAL 2020 conference: "SpiderWeb: A Spatial Data Generator on the Web"
- **Technologies:** Python, HTML, Ajax, JQuery, Bootstrap, GitHub, Linux, Apache Server

EDUCATION

University of California, Irvine

Sep. 2021 – Jun. 2023

University of California, Riverside

Sep. 2019 – Sep. 2021

B.S. in Computer Science

GPA: 3.7

Relevant Courses: Data Structures and Algorithms, Database Management, AI/Deep Learning, Operating Systems

Technologies: Java, C++, Python, PyTorch, JavaScript, HTML/CSS, SQL, Linux

OTHER PROJECTS

Fake Reviews Detector - *UCI Project in AI/ML*

Dec. 2022

- Designed long short-term memory (LSTM) **neural network** to identify bot-generated reviews for products
- Implemented logistic regression classifier and SVM to compare against the results of the LSTM

Pintos Operating System - *UCI Intro to Operating Systems*

Jun. 2022

- Enhanced threads implementation in Pintos OS and added priority scheduling of threads

Search Engine - *UCI Information Retrieval*

Dec. 2021

- Implemented text search engine in Python, including a crawler, indexer, and searcher

Hackathon - *UCR Cutie Hack*

Nov. 2019

- Won 1st place. Built a mobile game for Android in under 12 hours within a team of 4.
- Developed game logic in Java and tested to improve game flow

ACTIVITIES

President, Secretary | *Association for Computing Machinery at UCR*

Feb. 2020 – Sep. 2021

Membership Chair | *Women in Computing at UCR*

Feb. 2020 – Apr. 2021