Simran Bagaria

simran.bagaria@gmail.com | 425-635-8123 | Website | GitHub

Education

EXPECTED GRADUATION: **DECEMBER 2025**

B.S./M.S. Computer Science, University of Washington – Seattle

- **GPA: 3.92**
- Current MS student in combined BS/MS program – **graduated BS in August 2024**
- Relevant coursework: Machine Learning, Natural Language Processing, Computer Vision, Distributed Systems, Databases, Systems Programming, Data Structures and Algorithms

Experience

JUNE 2024 – AUGUST 2024

Software Engineering Intern / J.P. Morgan Chase Bank, Seattle, WA

- Built mobile application to streamline Commercial Real Estate Loans process (CREOS team)
- Using **Spring, Java, Hibernate, React.js** to design and implement photo upload mobile application from scratch
- Application expected to save over **30 minutes** per loan application and **2300 hours** annually

MARCH 2024 – PRESENT

Undergraduate Research Assistant / WEIRD Lab, University of Washington - Seattle

- **AI/ML** and **Robotics** research on training policies in simulation and transferring them to the real world
- Projects involved training a robots such as **Franka** and **LEAP Hand** to perform complex tasks such as hammering and assembling furniture
- Gaining extensive experience using **PyTorch** to train **deep reinforcement learning** algorithms such as **SAC** and **PPO**

SEPTEMBER 2023 – DECEMBER 2023

Teaching Assistant / CSE 351, University of Washington - Seattle

- CSE 351: The Hardware/Software Interface
- Teaching 30+ students weekly about concepts including data representation, caching, and virtual memory

Projects

APRIL 2024 – JUNE 2024

Distributed Key-Value Store

- Built **sharded**, **linearizable** key value store with **dynamic load balancing** and **atomic multi-key transactions**
- Designed and implemented algorithms such as **2 Phase Commit** and **Paxos** from scratch

JANUARY 2024 – MARCH 2024

StrategyQA: NLP Project to Answer Implicit Reasoning Questions

- Worked in group of 3 to design and implement full pipeline to answer implicit reasoning questions
- Used **ML/NLP** skills to use **PyTorch** and **Huggingface** models such as **BERT** and **T5** to generate predictions for questions
- Submitted to Allen AI Leaderboard and achieved **12th place** in SARI score category among over **200** submissions

OCTOBER 2023 – OCTOBER 2023

JP Morgan Chase Code for Good Hackathon

- Full-stack application for Rebuilding Together Aurora, an NPO geared towards providing home repairs for people in need
- Worked in team of 7 people to build fully functional app in 22 hours
- Used **Express.js, Node.js, MongoDB** to build **REST API**, **React.js** for front-end

AUGUST 2023 – PRESENT

3 Steps

- Calculus Learning platform featuring unlimited practice problems for each topic
- Live Demo: https://simbag04.github.io/3-steps-client
- Used **Express.js, Node.js, MongoDB, React.js, REST API, d3.js**

Skills

- Java, Python, PyTorch, C++, C, SQL, JavaScript, MongoDB, Express.js, React.js, Node.js, HTML, CSS, Git