

# Simran Bagaria

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## Education

EXPECTED GRADUATION: JUNE 2025

### B.S. Computer Science, University of Washington – Seattle

- GPA: 3.92
  - Relevant coursework: Machine Learning, Natural Language Processing, Computer Vision, Distributed Systems, Databases, Systems Programming, Data Structures and Algorithms
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## Experience

JUNE 2024 – PRESENT

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

- Working on application for Commercial Real Estate Loans (CREOS team)
- Using **Spring**, **Java**, **React.js** to create new photo upload mobile application and integrate with existing application

MARCH 2024 – PRESENT

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

- WEIRD: Washington Embodied Intelligence and Robotic Development
- Researching how to train policies in simulation and transfer them to the real world
- Projects involving training a robotic hand (LEAP Hand) to perform complex tasks such as hammering
- 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
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## 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

- StrategyQA – dataset containing questions involving implicit reasoning and answers
- 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 to generate predictions for questions
- Submitted to [Allen AI Leaderboard](#) and achieved 12<sup>th</sup> 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**
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## Skills

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