

# Kavel Rao

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## Education

**University of Washington Allen School, M.S. Computer Science** Jun 2025

- Combined Bachelors/Masters program

**ETH Zurich, Computer Science Foreign Exchange** Sep 2023 – Jan 2024

- One of five students selected for departmental exchange program at ETH in Zurich, Switzerland

**University of Washington Allen School, B.S. Computer Science** Mar 2023

- GPA: 3.97/4.0
- Washington NASA Space Grant Scholar: 4 year scholarship

**Relevant Courses:** Machine Learning, Database Systems, Deep Learning, Distributed Systems, Systems Programming

## Experience

**Software Engineer Intern – Stripe** Jun 2023 – Sep 2023

- Identified key merchant risk metadata through historical data queries and user interviews; surfaced in risk analyst tools to improve efficiency in fraud and credit reviews (millions/month) and reduce time-to-clue for fraud incidents
- Implemented flexible labeling and filtering system in merchant review interface, increasing functionality for future improvements to review tools and machine learning data pipelines

**Technologies Used:** Ruby, TypeScript, ReactJS, MongoDB, Splunk, Trino SQL

**Undergraduate Researcher – xlab @ UW CS (Advisor: Yejin Choi)** Feb 2022 – Present

- Developed self-iterative knowledge distillation method to produce compute-efficient language models outperforming larger scale general-purpose models on quality and diversity metrics by 62%
- Empowering future research towards socially responsible AI by releasing dataset for novel moral reasoning NLP task, consisting of over 1 million moral situations and explanations
- First-author paper accepted to EMNLP Findings 2023: <https://aclanthology.org/2023.findings-emnlp.812>

**Technologies Used:** PyTorch, Pandas, HuggingFace

**Teaching Assistant – Programming Languages, Wireless Comm @ UW CS** Mar 2022 – Jun 2023

- Designed lessons and taught 20+ students functional programming and advanced OOP in OCaml, Racket, Java
- Recruited by professor to TA as undergraduate based on performance in course and final project
- Worked with students through class time and office hours to ideate, scope, and implement innovative final projects such as multi-channel walkie talkie, radio astronomy

**Software Engineer, Part-time – Conversica** Jun 2021 – Sep 2022

- Reduced company spending by \$100,000/year building Kubernetes resource auditor with deployment pruning, cutting cluster size by 30%. Original scope was one-time cleanup, but now adopted into MLOps process
- Delivered infrastructure for AI-powered chat based on BRD, scalable to 100 concurrent sessions. Implementation included DynamoDB for context and config storage, REST-based Django API for flow and business logic, Locust load testing, and model inference autoscaling with Sagemaker endpoints
- Integrated and deployed 3rd-party semantic search service by building REST API wrapper for gRPC protocols. Will be used on front page of customer chat services

**Technologies Used:** Python, Django, AWS, Docker, Kubernetes, GitLab CI, Terraform, Jira

**Student Software Engineer – Husky Satellite Lab** Oct 2020 – Dec 2021

- Programmed embedded satellite systems to enable low earth orbit subsurface scanning radar experiments
- Designed satellite orientation control algorithm to provide directional radar adjustment using microcontroller drivers to interface with positional sensors and motors. Satellite scheduled for launch in late 2024

**Technologies Used:** C/C++, MSP 430 microcontroller

## Technical Qualifications

**Languages (Proficient):** Python, Java, C, SQL

**Languages (Familiar):** C++, Ruby, OCaml, Racket, Bash, JavaScript, TypeScript, HTML, CSS

**Tools:** PyTorch, Pandas, HuggingFace, Docker, Kubernetes, Django, Git, Terraform, Linux/UNIX, LaTeX