Kavel Rao

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Education

University of Washington Allen School of Computer Science, GPA: 3.95 **Jun 2023**

- B.S. Computer Science
- Washington NASA Space Grant Scholar: 4 year scholarship

Relevant Coursework: Machine Learning (graduate level), Database Systems, Data Structures and Parallelism

Experience

Software Engineer Intern - Conversica **Jun 2021 - Present**

- Building production platforms to improve conversational AI language comprehension and generation
- Reduced company spending by $100,000/year implementing Kubernetes resource auditor with deployment pruning
- Deployed document search service to enable context-aware natural language generation, creating personal connections for customers
- Collaborating with hybrid remote team using agile Scrum practices with Jira and Slack

Technologies Used: Python, Django, AWS, Docker, Kubernetes, Tensorflow, PyTorch, Bash, GitLab CI, Terraform

Undergraduate Researcher - xlab @ UW Allen School **Feb 2022 - Present**

- Exploring the intersection of explainable artificial intelligence, natural language processing, and ethics
- Investigating the ability of language models to reason about the morality of contextualized actions

Technologies Used: PyTorch, Hugging Face, GPT-3, Gensim, Pandas

Teaching Assistant - Wireless Communication @ UW Allen School **Mar 2022 - Jun 2022**

- Held office hours to accessibly enhance students' learning experience through
- Helped students ideate, scope, and implement innovative final projects using software defined radios

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

- Programmed embedded satellite systems to enable low earth orbit radar experiments
- Built satellite orientation control algorithm to provide directional radar adjustment using microcontroller drivers to interface with positional sensors and motors

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

President & Senior Mentor at Newport High School Rocketry Club **Sep 2016 - Jun 2020**

- Established repeatable engineering practices and fostered culture of peer-to-peer learning
- Recruited through in person events and social media to increase membership from 25 to 50 in 2 years
- Drove design choices and strong peer to peer learning culture, resulting in national placement 2 years in a row
- Spearheaded corporate engagement, resulting in recurring Aerojet Rocketdyne sponsorship of $3000 per year

Technical Qualifications

Languages (Proficient): Python, Java, C, SQL
Languages (Familiar): C++, Bash, JavaScript, HTML, CSS
Tools: Docker, Kubernetes, Django, Git, Terraform, Linux/UNIX, LaTeX**,** AWS (Sagemaker, DynamoDB, S3, Redshift)

Projects

Mutually - DubHacks Hackathon Project (Links: Code, Devpost, Video) **2021**

- Prototyped a democratic mutual aid platform to contribute to and receive financial aid directly from the community
- Category Finalist in the Downtown track of DubHacks, hosted at University of Washington

Technologies Used: Python, JavaScript, Django, ReactJS

Captioned FM Radio - Python Application (Links: Code, Writeup) **2020**

- Built a streaming FM radio player using signal processing with machine learning speech-to-text captions

Technologies Used: Python, NumPy, SciPy, PyTorch, Software Defined Radio

Design and Data Presentation - The American Rocketry Competition (Links: Slides, Video) **2020**

- Led team of 8 high school peers through data-driven rocket design and presentation of results in virtual conference
- First Place in The American Rocketry Competition Presentation Contest