Raghavi Putluri

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EDUCATION & INVOLVEMENTS

University of Washington (Paul G. Allen School of Computer Science & Engineering)**, Seattle, WA** **Exp: June 2026**

B.S. in Computer Science & Data Science

Involvements: ChatGPT Lab Member, GEN1 (First Gen College Students Club), WIC (Women in Computing), CodePath

TECHNICAL SKILLS

Python, React, Node.js, JavaScript, TypeScript, HTML/CSS, PyTest, Git, AI/ML, TensorFlow, scikit-learn, NLP, spaCy, SQL, Java, C

PROFESSIONAL EXPERIENCE

Software Engineering Intern| User Empowerment Lab | Seattle, WA **Jun - Sep 2025**

- Developed a **full-stack** decentralized social media **mobile app** using **React, Redux,** and **TypeScript**, enabling researchers to retrieve social interaction data efficiently.
- Re-architected backend infrastructure for a **decentralized server** system using **Docker**, improving **scalability** by **70%** and reducing latency by optimizing data retrieval processes.
- Developed Android frontend with **React Native** and Android Studio; fixed follow/unfollow persistence issues across authenticated and unauthenticated states, boosting accuracy by 80%

Undergraduate AI Research Intern | University of Washington | Seattle, WA **Mar - Jun 2025**

- Analyzed ChatGPT conversation patterns by **fine-tuning** proprietary annotation models, incorporating **VADER, DAC**, and **XLM-RoBERTa** to enhance accuracy in distinguishing personal versus general queries.
- Researched psychological impacts of AI chatbot interactions on teenagers using advanced NLP techniques (**NLTK, HDB-SCAN**, **BERT**), contributing to the development of a context-aware, **emotionally adaptive chatbot**.
- Led a cross-functional team of researchers and developers to architect a developmental-stage-sensitive chatbot tailored for adolescents, with plans to submit findings to CHI '26.

Software Engineering Intern | PLSE Lab, University of Washington | Seattle, WA **Jan - Jun 2025**

https://building-models-of-bobbinlace.notionlinker.com

- Developed an interactive Bobbin Lace **visualizer** using **JavaScript, Node JS,** and **Processing**, enabling real-time simulation of complex thread patterns and **improving usability** for textile makers.
- Applied object-oriented principles to modularize thread and stitch logic into reusable **JavaScript classes**, enhancing maintainability and debugging.
- Developed a real-time visualization with **Bézier curves** and dynamic animations to represent braid group operations and stitch sequences.

Software Engineering Intern | Svoboda Diaries Project, University of Washington | Seattle, WA **Jan - Jul 2024**

rivermap.svobodadiariesproject.org/

- Engineered a data pipeline with **Pandas/NumPy** to clean and normalize 1M+ historical trade records, improving dataset **accuracy** by **70%** and enabling scalable analysis for historians.
- Standardized 500K+ cargo records by removing duplicates, filtering irrelevant terms, and categorizing data into five main groups, improving consistency across datasets by 30%.
- Engineered a **Node.js** and **GeoJSON** backend to power an interactive map visualizing 1M+ cargo data points, enabling historians to analyze trade patterns across 200+ historical routes.

PROJECTS

TutorGPT | Full Stack AI Tutor (TypeScript, React, FastAPI)

- Built a full-stack AI tutoring platform using **React**, **TypeScript**, **FastAPI**, and the **OpenAI API**, generating personalized lesson plans and dynamically routing topics and subtopics into dedicated web pages
- Implemented a **real-time chat interface** with ChatGPT and an integrated note-taking feature to enhance user engagement and knowledge retention

AI Opinions | Data Analysis on Public Perception of ChatGPT via Reddit (Python, NLP)

- Conducted opinion mining on 10K+ Reddit posts using NLP techniques (**TF-IDF with K-Means, Word2Vec with HDBSCAN**) to analyze sentiment and uncover public perceptions of AI tools.
- Designed a pipeline for topic modeling and emotional inference, identifying key themes such as emotional support, skepticism, and creativity in AI interactions.