Karma Woeser

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Technical Skills

Languages: Python (4 years), JavaScript (3 years), C (3 years), Java (1 year)
Frameworks & Libraries: React, Flask, Express, Pandas, NumPy, Scikit-learn, Tailwind CSS
Tools & Technologies: Git, Linux, Docker, Jupyter, Node.js, MongoDB, PostgreSQL, AWS

Experience

Cognizant June 2024 – August 2024
Generative AI Intern Remote

- Assisted in the fine-tuning of models using **PyTorch** and evaluated performance to inform further optimization.
- Documented model behavior, results, and tradeoffs to support ongoing development and experimentation.

UO Solar Radiation Monitoring Lab Sept 2022 – June 2023
Data Analyst Intern Eugene, OR

- Refactored **800+ lines** of legacy Perl into Python, improving code readability and reducing complexity.
- Automated data processing using **Python** and **NumPy**, increasing processing speed by ∼**15%**.
- Retrieved and validated solar radiation data from monitoring stations across Oregon.

Education

University of Oregon Eugene, OR
BS in Computer Science, Minor in Math Expected Graduation Date: June 2025
Coursework/Clubs: **Leet Club**, Data Structures and Algorithms II, **Machine Learning**, System and Security Administration, **Software Engineering**

Projects

Fake News & Political Bias Detector | *Python, Scikit-learn, FastAPI, React, TypeScript*

- Built a full-stack web app to detect misinformation and political bias in news articles, using a text classification model that achieved a **98% F1-score** on 45,000+ samples.
- Developed a **FastAPI backend** to serve model predictions and handle article URL processing.
- Built a responsive **React and TypeScript** frontend for submitting URLs and displaying results.

Article Curation Platform | *TypeScript, React, Node.js, PostgreSQL, Tailwind CSS, Docker, AWS*

- Has been used by **50+ students** to save and manage their favorite articles.
- Built a React frontend with optimized API requests using **React Query** for caching and background updates.
- Deployed on **AWS EC2** using Docker Compose with a self-managed **PostgreSQL** instance.

GitRead – README Generator | *Python, Flask, React, Google Gemini API, GitHub OAuth*

- Used by **100+ students** on campus, making documentation easier for developers.
- Developed an automated tool that generates detailed README templates from GitHub repositories.
- Integrated **secure GitHub authentication** via Flask-Dance for a smooth login experience.

House Prices Predictor | *Python, Flask, Pandas, scikit-learn, Matplotlib*

- Built a **machine learning pipeline** to predict house prices using a dataset of 1,460 homes and 79 features.
- Created a **Flask API** to integrate the trained machine learning model.
- Optimized Random Forest and Gradient Boosting models using GridSearchCV, reducing **RMSE by 10%**.

EasyA – Grading Analysis App | *Python, Flask, JavaScript, MongoDB, Docker*

- Built backend **APIs** to process and filter grading distributions.
- Integrated Chart.js to create interactive, real-time grade trend visualizations.
- Designed a **MongoDB** schema for efficient storage and querying of historical grading data.

AI Chatbot | *React, Express, Clerk API, Google Gemini API*

- Developing a full-stack AI chatbot application using **React** for the frontend and **Express** for the backend, integrating **Google Gemini AI** for NLP.
- Implemented Clerk for **user authentication** and management, enabling secure user sign-ups and logins.