

Education

Oregon State University

- Bachelor's of Science in Computer Science, 2025
 - Bachelor's of Science in Kinesiology, 2021
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Experience

Backend Developer and Machine Learning Engineering

Levrum Data Technologies | March 2025 - Present

Collaborative capstone thesis project focused on developing a backend system to support real-time predictive modeling for first responder logistics.

- Architecting a Python-based web application using Flask to process real-time data streams.
- Designing and implementing PostgreSQL database schemas to manage geolocation and sensor data.
- Integrating machine learning models to predict trend patterns in emergency team movements.
- Collaborating in a cross-functional team to prototype a responsive dashboard for first responders.
- Responsible for deployment planning, backend logic, and data pipeline integration

Tech Stack: Python, Flask, PostgreSQL, SQLAlchemy, scikit-learn, pandas, NumPy, Git, REST APIs

Web Development Projects

Action Item Tracker | (jonahsactionitemtracker.pythonanywhere.com)

A task management tool for adding, removing, and sorting action items.

- Stores action items in a persistent database with meeting and user associations.
- Supports sorting by meeting, assigned user, or completion status.
- Enables users to log time-stamped progress updates.
- Provides functionality to mark items as complete.

Tech Stack: Python, Flask, SQLite, HTML, CSS, Git, PythonAnywhere

Checkout System | (jonahscheckoutsystem.pythonanywhere.com)

A community-based platform for renting and donating items.

- Implements secure account creation with encrypted credentials.
- Allows bulk item uploads via downloadable templates.
- Tracks checked-out items with due dates.

Tech Stack: Python, Flask, SQLite, HTML, CSS, Git, PythonAnywhere

Artificial Intelligence, Operating System Development, Shell Scripting Projects

Custom Shell

A POSIX-compliant shell written in C, similar to Bash.

- Implements internal commands (cd, exit, unset), pipelines creation, redirection, and signal handling.
- Uses the Make build system for compiling, assembling, and linking.

Tech Stack: C, Bash, Linux, Make Build System

TUI for OpenAI (*Chosen for the 2025 Agentic AI Competition*)

A shell-based interface for OpenAI's API, supporting both text and audio prompts.

- Sends requests to the ChatGPT-4o-mini model and processes JSON responses.
- Designed for seamless integration with Bash shells.

Tech Stack: Bash, OpenAI API, Vim

References

Dr. Creighton Helms, Director Gervais School District
Joseph Jess, EECS Instructor at Oregon State University

Dr. Guillermo Tonsmann, EECS Senior Instructor Oregon State University

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