Loretta Gray

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Summary

Al Engineer | Scientific Modeling & Full Stack ML

Independent AI Engineer with hands-on experience developing GPT-powered apps, optimizing LLM outputs, and testing fallback behavior in real-world deployments. Creator of Pre-Interview FlashDeck, a prompt-driven assistant built using Python and OpenAl APIs. Adept at bridging ML logic with user-facing tools. Experienced in scientific modeling workflows, data pipelines, and QA across full-stack environments — from backend logic to interactive visual tools. Currently targeting roles in Python-based machine learning, computational modeling, bioinformatics, and fullstack scientific computing.

Technical Skills

Programming Languages: Python (primary), SQL, C++, JavaScript

ML & Scientific Libraries: NumPy, PyTorch, Scikit-Learn, TensorFlow, OpenCV, Keras

Data Tools: Apache Spark, FAISS, Snowflake, Tableau Full Stack: GitHub, Colab, HTML, Flask (learning), React

Concepts: Computational Modeling, Scientific Computing, Prompt Engineering, Model Evaluation, Bioinformatics (in-

tro), HPC Techniques

Education

California Science and Technology University — MA Certification in Al and Data Science, 2023 (GPA: 3.9) California State University, Hayward — BS in Computer Science, 1992

Experience

Independent AI Engineer | Junior Full Stack Data Scientist - Computational Biophysics & Machine Learning

Self-Initiated Projects — April 2025 – Present

- Built and deployed Pre-Interview FlashDeck, a GPT-powered app for tailoring interview answers using employer inputs.
- Developed content moderation prompts, fallback logic, and semantic search with FAISS + OpenAI API.
- Created legal automation tools simulating real compliance workflows using Python and GPT APIs.
 Full-stack development across React, Python, GitHub, and Colab notebooks.
- Optimized GPT outputs for consistent fallback prevention and QA accuracy across scientific-style queries.
- Built scalable, testable pipelines for modeling hypothetical datasets using Python + prompt logic.
- · Exploring bioinformatics and scientific modeling workflows, focusing on HPC optimization and ML framework integration for real-world simulations.

CUE LLC - AI Voice Reader

San Jose, CA — Jan 2025 – April 2025

Read canned scripts aloud using headset and facial recognition AI software.

Sub Teacher Source – Long-Term Substitute Teacher Various Schools, Alameda County — Nov 2024 – Present

• Long-term teaching assignments across middle and high schools in multiple subjects.

REMOTASK Inc – AI Model Trainer (Bulba Code T3)

Remote — Feb 2024
• Trained AI models by analyzing prompts in R, Python, C++, JavaScript, and HTML to solve real-world problems.

California Dept. of Education (Contract via Visual Spiritus Inc)

Sacramento, CA — Aug 2006

- Led Y2K conversion for USDA National School Lunch Program (1500+ systems).
- Won a 2-year CMAS contract; used RDMS, project management, and batch tools.

Bank of America – Systems Engineer, Finance Systems Concord, CA

Debugged schema storage using Reorg tools; built Short-Term Asset Sales System for NY branch.

Chevron Corporation - Programmer Analyst, HR Systems San Ramon, CA

• Developed and implemented student recruitment systems using search-based matching and reporting tools.

Projects & Coursework Highlights

- Pre-Interview FlashDeck GPT-powered app for auto-generating tailored interview responses.
 Colab-based prompt QA experiments for fallback behavior, chunking strategies, and LLM output testing.
 LLM Prompt QA for scientific scenarios modeled structured responses to simulate regulatory and medical work-

- Tableau: Earthquake Visualization Project (Mag 6+), NLP Seq2Seq Encoder Models, YOLO vs RCNN Comparison
 Al Tools: Talking Image Automation, CNN Overfitting Analysis, Reinforcement Learning Flowcharts
 ML Techniques: PCA, SVD, Decision Trees, Random Forest, Isotonic Regression, Dense vs Sparse Classification
 Apache Spark & PySpark ML: Spam Detection, RMSE Analysis, Uber Analytics, Ride-Share Data Projects
 GitHub: https://github.com/Loretta991/Al-ML-Code-Projects
 Live App: https://kjnlyp.csb.app/