

Jacob Gavin

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STATEMENT

Results-Driven software engineer with experience in full-stack AI/ML development and a passion for learning new technologies. Comfortable in AI-assisted development cycles and looking to leverage my skills and adaptability to contribute to groundbreaking projects in the dynamic tech industry of the current era.

EDUCATION

Pennsylvania State University

Bachelor of Science in Computational Data Science

State College, PA

Aug. 2022 – May 2026

EXPERIENCE

AI/ML R&D Engineer Intern

Joint Interagency Task Force - South

May 2025 – Aug. 2025

Key West, FL

- Developed on a machine learning model to predict drug trafficking vessel vectors using historical data
- Bootstrapped an image classification pipeline to classify massive amounts of imagery for analyst use
- Authored reports and standard operating procedure documents to ensure accessibility of tools by analysts with non-technical backgrounds

Research and Development Engineer Intern

Penn State Applied Research Laboratory

May. 2024 – Present

State College, PA

- Created in-house chat application using React, FastAPI, and Postgres to provide research staff with secure access to the latest LLM technology
- Managed CI/CD pipelines using Atlassian Bamboo to automate testing and in-lab deployment of applications
- Implemented usage tracking and feedback system to monitor and improve application performance, allowing project leads to make data-driven decisions

Manned Flight Simulator Engineer Intern

Naval Air Systems Command

May 2023 – Aug. 2023

Patuxent River, MD

- Worked on a cutting edge military flight simulator to support pilot training and aircraft testing
- Reduced testing time by over 80% through optimization of existing scripts
- Automated testing pipelines using Python, compiling legacy Matlab code into standalone executables for portable testing
- Collaborated with a cross-functional team of engineers and naval aviators to ensure software met operational requirements

PROJECTS

Transformer | Python, PyTorch, Deep Learning, AIML

June 2025

- Developed a transformer model from scratch using PyTorch to perform machine translation on English to French text
- Implemented KV caching to optimize inference time
- Manually cleaned and tokenized dataset using Python to ensure high quality training data

TECHNICAL SKILLS

Languages: Java, Python, Golang, SQL (Postgres), JavaScript, HTML/CSS, R

Frameworks: React, Node.js, Flask, FastAPI, WordPress, Material-UI, FastAPI

Developer Tools: Git, Docker, NeoVim, Podman, Kafka

Libraries: pandas, NumPy, Matplotlib, TensorFlow, PyTorch