

Oliver Perrin

Machine Learning & Data-Driven Software Engineer | Building Scalable ML Systems & Full-Stack Solutions

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EXPERIENCE

Triaxis Power Consulting LLC | *IoT Systems Development Intern* | Charlotte, NC June 2023–August 2024

- Developed a **Raspberry Pi monitoring system** automating structural and thermal tracking in power plants.
- Built **Python** pipelines for cloud uploads and analytics, reducing manual maintenance by 50%.
- Rejoined in 2024 to expand predictive dashboards and optimize **NAS systems**, reducing storage costs by 80%.

The Global Career Accelerator | *Data Science Participant* | Remote May–July 2025

- Conducted advanced data analyses on global datasets using **SQL** and Python (**Pandas**, **Plotly**) to uncover behavioral trends.
- Designed and presented data dashboards translating findings into actionable business insights.
- Collaborated remotely with international peers to deliver data-driven reports.

PROJECTS

PlayAxis: Full-Stack Multi-Sports & Events Web App | playaxis.netlify.app September 2025

- Architected a full-stack sports web platform using **React.js**, **FastAPI**, and **PostgreSQL** to deliver real-time schedules, statistics, and results.
- Integrated 3+ public APIs and automated CI/CD pipelines (Netlify, Koyeb), enhancing deployment speed by 40%.
- Implemented responsive UI with **TailwindCSS** and optimized REST endpoints for efficient data retrieval.

Movie Recommendation System | DeepLearning.AI October 2025

- Built a recommendation engine using **content-based filtering** with **TensorFlow** and **Scikit-learn**.
- Engineered TF-IDF embeddings and cosine similarity to deliver personalized predictions on 10k+ movie entries.

K-Means Image Compression | DeepLearning.AI October 2025

- Applied **K-Means clustering** with **NumPy** to compress RGB images by 90% with minimal perceptual loss.
- Visualized iterative centroid convergence and optimized initialization for faster results.

Personal Portfolio Website | oliverperrin.netlify.app August 2025

- Built and deployed a responsive personal portfolio using **HTML**, **CSS**, and **JavaScript**; hosted via Netlify with GitHub CI/CD integration.

EDUCATION

Appalachian State University | **Computer Science BS, Minor in Mathematics, Data Science Certificate** May 2026

- Developed a mathematical language interpreter in **Haskell**, a Y86 pipelined CPU simulator in **C/C++**, and a **Java-based 2D game engine**.
- Created interactive data visualizations using **D3.js** and **Tableau**.
- Team Captain, University Esports Club.

CERTIFICATIONS

- **Machine Learning** — Stanford Online & DeepLearning.AI (Coursera)
- **Unsupervised Learning, Recommenders, Reinforcement Learning** — DeepLearning.AI & Stanford University (Coursera)
- **Advanced Learning Algorithms** — DeepLearning.AI & Stanford University (Coursera)
- **Supervised Machine Learning: Regression & Classification** — DeepLearning.AI & Stanford University (Coursera)
- **AI Professional Skills** — OpenAI & The Global Career Accelerator
- **Python & Data** — The Recording Academy (The Grammys) & The Global Career Accelerator
- **Querying Data** — Intel Corporation & The Global Career Accelerator

SKILLS

Languages: Python, C, C++, SQL, Java, JavaScript, HTML, CSS, Haskell, Assembly (x86), Maple

Frameworks & Tools: TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, Matplotlib, React.js, FastAPI, Node.js, Plotly, D3.js, TailwindCSS, Jupyter, CMake, Maven

Core Competencies: Machine Learning, Predictive Modeling, Statistical Analysis, MLOps, Software Engineering