

Daniel Hu

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WORK EXPERIENCE

Data Science Intern | ESDC | Ottawa, ON (Hybrid) April 2025 – Present

- Conducted multivariate regression in Python, R, and Jupyter to identify productivity factors in EI approvals, reducing delays for 5,000+ daily applicants by uncovering bottlenecks and proposing corrective measures.
- Aligned with 20+ stakeholders in Agile sprints to analyze KPIs, reducing Azure data validation time by 77%.
- Built 25+ features in Power BI dashboards using DAX, Power Query, and SSMS to handle 40M+ data points.
- Diagnosed and fixed 10+ bugs in CI/CD and QA workflows, with clear documentation for future debugging.

Software Engineering Intern | Tramona | Seattle, WA (Remote) October 2024 – April 2025

- Developed scrapers to pull 50000+ travel listings and expanded market reach by crawling media platforms.
- Designed full-stack platform features in a 1000+ file codebase using Next.js, TypeScript, SQL, and Python.
- Integrated a Llama AI chatbot via transfer learning on Hugging Face to autonomously handle 50% of client support tickets and implemented a real-time email reminder system to improve customer retention by 33%.
- Created 10+ reusable frontend components for cross-device compatibility, reducing code repetition by 17%.

AI Engineering Intern | Outlier | San Francisco, CA (Remote) August 2024 – October 2024

- Fine-tuned scalable AI training pipelines using Java and C across 10+ models, ensuring robust architecture.
- Monitored 100+ AI tasks in math, data, and image analysis, leveraging RAG and reinforcement learning to identify performance gaps, retrain models, and improve response relevance, reducing hallucinations by 5%.
- Evaluated 5000+ lines of AI-generated code across 100+ prompts, increasing overall model accuracy by 3%.

Data Science Intern | GE Vernova | Hangzhou, ZJ (On-site) July 2024 – August 2024

- Automated BOMs with VBA and developed multilingual OCR software with 98% accuracy, which eliminated manual errors, reduced execution time from 5 hours to 5 minutes, and boosted department efficiency by 8x.
- Created Smartsheet scripts to track safety compliance and product quality, cutting response times by 50%.
- Proposed DIY cart designs for machine operations; one adopted plant-wide, reducing overlap time by 38%.

PROJECTS

Marketwire | Python, FastAPI, BS4, Supabase, Next.js, React, TypeScript, Tailwind CSS | [Source Code](#)

- Smart investing platform that scrapes and analyzes real-time news sentiment to automate trading actions.

Backdrop Zap | Java, Spring Boot, React, Vite, MySQL, JavaScript, Node.js, Clerk, Axios | [Source Code](#)

- Precise SaaS background removal tool utilizing APIs and deep semantic segmentation with alpha matting.

Study Buddy (Project Leader) | Python, Django, Flask, SQLite, Scikit-Learn, HTML, CSS | [Source Code](#)

- Uses the K-Means clustering algorithm to match students by goals, courses, availability, and learning styles.

Autonomous Vehicle Object Detection | TensorFlow, Keras, OpenCV, Matplotlib, CNNs | [Source Code](#)

- Achieves a 0.99 confidence score through hyperparameter tuning of a YOLO-based DarkNet neural network.

EDUCATION

University of Waterloo | Bachelor of Mathematics in Data Science | 3.9/4.0 GPA Expected April 2028

- **Coursework:** Object-Oriented Software Development, Data Structures, Optimization, Logic and Computation
- **Activities:** Varsity Badminton Player (4x National Medalist), Data Science Club Mentor, CS Club Developer

Stanford University (Coursera) | Algorithms, ML, and DL Specialization Completed December 2024

TECHNICAL SKILLS

Languages: Java, Python, C, C++, SQL, VBA, HTML, CSS, JavaScript, React, TypeScript, R, Flask, DAX, Racket, Linux

Technologies: Jupyter, PyTorch, Azure, Azure DevOps, Clerk, Vercel, GitHub, VS, NetBeans, Power BI, SSMS, Figma