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SUMMARY

University of California, Irvine graduate (B.S. Computer Science) excited about building scalable web applications and infrastructure solutions. Experience in full-stack web development, machine learning projects, and maintaining personal services on cloud platforms.

EDUCATION

March 2024

Bachelor of Science in Computer Science

UNIVERSITY OF CALIFORNIA, IRVINE | IRVINE, CALIFORNIA

Major: Computer Science | Specialization: Intelligent Systems

Relevant Coursework: (1) Project in AI, (2) Machine Learning and Data-Mining, (3) Data Structure Implementation and Analysis, (4) Design and Analysis of Algorithms, (5) Introduction to Data Management, (6) Application of Probability in CS

PROJECTS

- **Electricity and Settlement Detection in Sub-Saharan Africa** (Python, PyTorch / PyTorch Lightning)
 - Developed machine learning models to identify human settlements without electricity using satellite imagery
 - Segmentation CNN, U-Net, ResNet-based architectures, and UNet++ models
 - Preprocessed data from Sentinel-1, Sentinel-2, Landsat 8, and VIIRS satellites
 - Optimized models through hyperparameter tuning
- **Crawler and Search Engine** (Python, Flask)
 - Built a full web crawler that sends requests to a server and parses successful responses
 - Using collected data, built a TF-IDF search engine from scratch using Flask
 - Can handle tens of thousands of documents or web pages with a query response time under 150ms
- **Blog Website** (TypeScript, Next.js)
 - Engineered a responsive Next.js website featuring home, about, contact and blog sections
 - Utilized dynamic routing and server-side rendering to optimize performance and SEO
- **Ecommerce Website** (TypeScript, Next.js) [In Progress]
 - Creating a full-stack Next.js ecommerce platform that integrates PayPal and Stripe payment gateways
 - Implementing search and category-based filtering to streamline product discovery
 - Authentication to allow customers to sign in and view order history and admins to create and modify product listings

SKILLS

- **Programming / Scripting Languages:** Python, TypeScript, C++, C, Bash
- **Web Development:** Flask, React, Next.js, Node.js, FastAPI, Firebase
- **Machine Learning:** PyTorch, PyTorch Lightning, Scikit-Learn, OpenCV, Weights & Biases, NumPy, Matplotlib
- **Databases:** MongoDB, MySQL
- **Tools:** Docker, Git
- **Operating Systems:** Windows 11, Ubuntu Desktop & Server
- **IT and Productivity:** Microsoft Office 365 (Word, Excel, PowerPoint), RustDesk (remote access)
- **Hardware:** PC hardware assembly, component selection, troubleshooting

ADDITIONAL EXPERIENCE

- Maintained personal services and web servers using Nginx reverse proxy, SSL certificates, configured Cloudflare DNS records, and cloud compute instances on AWS EC2 and Oracle Cloud