Liam O'Driscoll

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SKILLS

AI: OpenAI, LlamaIndex, RAG, Vector Databases ML: OpenCV, NLTK, PyTorch, TensorFlow, Keras, sk-learn, Numpy Stack: MERN, Laravel PHP Frontend: HTML, CSS, Tailwind, Bootstrap, JavaScript, TypeScript, React, Next.JS Backend: Node.js, Express, PHP Databases: MySQL, PostgreSQL, MongoDB, Firebase Languages: Python, R, C++, Java Tools: Vercel, Heroku, GitHub, Jira, Amazon S3, Figma DevOps: Integrated CI/CD Pipelines, Docker, Bash

EXPERIENCE

Full Stack Developer | TrustLoop

May 2024 - Present

- Developed 3 core features including an unframeworked javascript widget, automated email delivery system, and bulk SMS messaging system which enabled our customers to capture more feedback
- Stack: Laravel PHP, OpenAI Tools: Jira, Github, Heroku, Figma

Junior Technical Product Manager | AltGrowth

Oct 2023 - April 2024

- Led a cross-functional team of contracted developers & designers in the end-to-end development of <u>TrustLoop</u>, a B2B cloud based SaaS web app specifically designed for other startups to capture feedback before product market fit.
- Created a CI/CD pipeline by leveraging Jira's ticketing system, Heroku's review apps, & Laravel PHP's feature testing framework to automate code delivery and ensure constant development of TrustLoop.
- Stack: MERN, Laravel PHP, OpenAI Tools: Jira, Github, Heroku, Figma

Product Intern - Business & Technology | AltGrowth

June 2023 - Sep 2023

- Led a cross-functional team of developers & designers in developing an MVP for an OpenAI based web app for composing & sending SMS messages.
- Identified and led a team of contracted developers in resolving a major security vulnerability.
- Stack: MERN, OpenAI Tools: Jira, Github, Heroku, Figma

HACKATHON PROJECTS

Real Estate Contract Compliance | AI Agents & Fintech Hackathon | Stanford Law Hackathon | MongoDB Hackathon

- Leveraged MongoDB vector database & a RAG pipeline for validating real estate purchase agreement documents.
- MERN, OpenAI, Supabase, RAG

recall-app.xyz - repository | AI Accelerated Learning Hackathon

- Simple & beautiful AI based web app designed for students to record & revisit any TA office hour section.
- MERN, Amazon S3, OpenAI

ML PROJECTS

From Image Classification to Semantic Segmentation with CNNs

- Provided a comprehensive review of image classification using MLPs, CNNs, and transfer learning with ResNet50.
- Demonstrated how ResNet50 can be adapted to semantic segmentation tasks for coarse and fine grain masks.
- Implemented the U-NET architecture for semantic segmentation resulting in improved accuracy.
- Google Compute Engine, Python, Keras, TensorFlow, Numpy, Matplotlib, Transpose Convolution

Statistical Language Model

- Implemented unigram, bigram, and trigram language models with additive smoothing and linear interpolation.
- Tested and optimized hyperparameters to achieve a perplexity score of **2.165** on the best model.
- Python, Statistics, Natural Language Processing

Sequence Labeling - Named Entity Recognition

- Designed a Viterbi decoding algorithm to compute the highest scoring tag sequence based on a scoring function.
- Evaluated the model's precision, recall, and F1 score on CoNLL 2003 data, demonstrating its effectiveness in N.E.R.
- Python, Statistics, Natural Language Processing

EDUCATION

University of California, Santa Cruz

June 2023

Bachelor of Science, Computer Science - Dean's List

RELEVANT COURSEWORK

ML: Applied Machine Learning, NLP, Computer Vision, Statistics for Engineers, Statistical Inference, Bayesian Statistics CS: Data Structures & Algorithms, Algorithm Analysis, Linear Algebra, Multivariable Calculus I & II, ODEs, Computational Models, Computer Systems Design, Computer Architecture, Embedded Systems