Evan Gabrielson

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EDUCATION

University of Southern California (USC), Los Angeles, CA

Masters of Science in Electrical and Computer Engineering (Machine Learning and Data Science) December 2023

Bachelors of Science in Electrical and Computer Engineering May 2022
- GPA 3.85 (Magna Cum Laude)

Academic Honors: USC Presidential Scholarship, USC Viterbi Research Fellowship, Lundquist Family Scholarship

SKILLS & AWARDS

Programming: Python, Typescript / Javascript, C/C++, MySQL, PostgreSQL
Tools: NumPy, Pandas, PyTorch, LangChain, HuggingFace, Sci-kit Learn, NextJS, Docker, AWS CDK, Kaggle
Awards: TroyLabs "Startup of the Year", Contrary VC Nationwide College Startup Champions, Viterbi Merit Research

EXPERIENCE

Datum Technologies Corporation, Los Angeles, CA January 2024 - May 2024
Senior Software Engineer
- Accelerated completion time of lease abstraction process from 47 to 9.5 minutes per lease by automating the distillation of PDFs into question-answer pairs using AWS S3, Textract, PyTesseract and Document Question-Answering inference with LangChain
- Boosted initial Document QA model accuracy by 25% through optimized text vectorization in Pinecone Database and RAG
- Developed a toolkit and intuitive UI for augmenting question-answer pairs with spatial and citation data from human labellers, enabling continuous Document QA model improvement via RLHF and few-shot example prompting

Carbonlink Incorporated, Los Angeles, CA December 2021 - December 2023
Founder and Chief Technology Officer
- Conceptualized, developed, and launched a SaaS platform delivering automated carbon emission accounting and emission offsetting services in partnership with industry-leading carbon credit suppliers boasting $60 million volume from 200+ projects
- Engineered a RESTful API provisioned in AWS's Cloud-Development Kit (CDK) to enable CI/CD for versioning core emission accounting and offsetting services, increasing DAU by 50% and total usership by 125% since launch
- Pioneered Estimate AI engine to automate emission estimation, using LangChain RAG, GPT-4 agents, and customer inventory data to predict with 85% accuracy the top emission factors related to consumer products and goods
- Designed and facilitated execution of product roadmaps by leading Agile scrums for team of 12 software engineers and designers
- Identified product feature improvements using insights extracted from customer support tickets and data analytics processed from MySQL database and OpenSearch

USC Institute for Technology and Medical Systems, Los Angeles, CA August 2020 - September 2021
Research Scientist
- Compared efficacy of convex hull algorithms for reconstructing geometries used to simulate neuron pathways using brain imaging data collected from mice, saving critical time and funding to accelerate studies on effects of neurological diseases
- Optimized Graham Scan algorithm in NumPy and Pandas to optimize runtime complexity of convex hull generation, shrinking total processing time from 23 minutes to 2 minutes per dataset leading to near real-time simulation of neurons from brain images

Northrop Grumman, Woodland Hills, CA
Software Engineer May 2021 - August 2021
- Adopted a test-driven approach to feature improvement and fault rectification, collaborating with colleagues to enact a robust unit test development procedure speeding up weekly unit test creation by an average of 15% per test engineer
- Discovered number overflow error in precision aircraft temperature sensors by analyzing bit manipulation failures in set of Simulink unit tests, preventing recall of hundreds of mission-critical aircraft navigation systems
Software Engineer May 2020 - August 2020
- Generated an IBM Rational Doors DXL script to preview changes across tens of thousands of engineering requirements
- Modernized unit testing with a visual dashboard programmed through MATLAB to showcase error traces and failure rate
Systems Engineer May 2019 - August 2019
- Coded an adaptive filter for denoising signal input from an accelerometer sensor, isolating original signal with 99% accuracy

PROJECTS

Gabrielson & Company: Financial Check OCR — *Data Scientist*, Berkeley, CA March 2021
- Leveraged OpenCV's OCR toolkit, Kaggle's financial check dataset, and domain adaptation techniques to implement financial check filing system for family-owned accounting firm, eliminating 5 hours of manual check filing per week

NASA CubeSat Mission "Dodona" — *Electrical Engineer*, Marina Del Rey, CA August 2019 – February 2020
- Directed hardware design, testing and final integration of a novel solar panel array and power storage system on a micro-satellite used to qualify Lockheed Martin's SmartSat™ image processing and machine learning instruments for space flight.

LEADERSHIP

Troy Tones A Cappella Group — *Vice President and Treasurer*, Los Angeles, CA September 2020 - May 2022
USC Club Water Polo — *Treasurer*, Los Angeles, CA August 2020 - May 2021
Harbor House Afterschool Program — *Math Tutor (Grades 6-12)*, Oakland, CA January 2019 - August 2020