

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++, SQL (PostgreSQL, MySQL), NoSQL (DynamoDB, Firestore),

Tools / DevOps: NumPy, Pandas, PyTorch, LangChain, RAG, AWS, GCP, Docker, Apache Spark, Sci-kit, OpenCV, Agile

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 lease abstraction process from 47 to 9.5 minutes by automating the distillation of lease PDFs into question-answer pairs using AWS S3, Textract, and Document QA inference with LangChain RAG, GPT-4 Turbo and Pinecone Vector DB
- Developed PDF annotation interface for coupling LLM-generated question-answer pairs with human feedback, boosting data extraction accuracy to 99% while storing training data for Document QA model improvements via RLHF in AWS Sagemaker
- Spearheaded scope, timeline and business-impact analysis of automated lease abstraction tool, executing on 100% of milestones set

Carbonlink Incorporated, Los Angeles, CA

December 2021 - December 2023

Founder and Chief Technology Officer

- Conceptualized, developed, and launched a SaaS platform delivering semi-automated carbon emission accounting and emission offsetting services in partnership with industry-leading carbon credit suppliers boasting \$60 million in volume from 200+ projects
- Engineered a REST API provisioned in AWS's Cloud-Development Kit (CDK), enabling developer access to emission accounting and offsetting services, increasing total service usership by 125%
- Pioneered “Estimate AI” engine to identify the most impactful emission factors in consumer products with up to 85% accuracy using LangChain RAG, GPT-3.5 Turbo, Climatiq Emission Factor Database and Chroma Vector DB
- Planned and managed execution of multi-product Agile development roadmap, leading Agile scrums for 12-person team
- Identified Carbonlink's API as a high-impact growth channel 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 unit tests in C++ Bazel for UH-60 Blackhawk and programmed visual dashboard for unit test analytics and error tracing
- Created script to extend IBM Requirements Database to allow for database transactions, change previews and reversions

Systems Engineer

May 2019 - August 2019

- Coded an ARIMA model for denoising accelerometer signal input, isolating original signal with 99% accuracy after 100ms

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