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 3.85/4.0 (Magna Cum Laude)

Honors: USC Presidential Scholarship, USC Viterbi Research Fellowship, Lundquist Family Scholarship
Awards: TroyLabs "Startup of the Year", Contrary VC Nationwide College Startup Champions, Viterbi Merit Research (x4)

SKILLS

Programming: Python, Typescript / Javascript, HTML, CSS, C/C++, SQL, NoSQL, Rust
Tools: NumPy, Pandas, PyTorch, LangChain, AWS, PySpark, GCP, Docker, Scikit Learn, LangSmith, Git, NextJS

EXPERIENCE

Datum Technologies Corporation, Los Angeles, CA January 2024 - May 2024
Senior Software Engineer - Data Pipelines
- Accelerated lease abstraction process from 47 to 9.5 minutes by inferring question-answer pairs from lease PDFs 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 with AWS Sagemaker
- Spearheaded scope, timeline and business-impact analysis of automated lease abstraction tool, executing 100% of milestones set

Carbonlink Incorporated, Los Angeles, CA December 2021 - January 2024
Founder and Chief Technology Officer
- Conceptualized, developed, and launched a B2B platform delivering carbon emission accounting and emission offsetting services with industry-leading carbon credit suppliers boasting $60 million in volume from 200+ carbon reduction projects
- Identified Carbonlink API as a high-impact growth channel by analyzing user interviews and OpenSearch traffic data pipeline
- Engineered Carbonlink's REST API and Typescript SDK provisioned using AWS Cloud-Development Kit and API Gateway, enabling developer access to emission accounting and offsetting services and increasing paid subscriptions by 125%
- Built "Estimate AI" engine by processing product information using LangChain RAG, GPT-3.5 Turbo, Climatiq Emission Factor Database and Chroma Vector DB to predict emission factors in consumer products with accuracy of 85%
- Coordinated multiple product roadmaps via Agile development by feature planning and leading daily scrums for 12 person team

USC Institute for Technology and Medical Systems, Los Angeles, CA August 2020 - September 2021
Research Scientist
- Compared efficiency of convex hull algorithms for reconstructing geometries simulating neuron pathways to study Alzheimer's
- Optimized runtime complexity of convex hull generation with Graham Scan algorithm coded in NumPy, reducing processing time of brain imaging data from 23 minutes to <1 minute leading to near real-time simulation of neurons from brain images

Northrop Grumman, Woodland Hills, CA May 2021 - August 2021
Software Engineer
- Collaborated with stakeholders to fortify unit test procedures, hastening fault rectification by increasing average weekly unit tests completed from 20 to 50 per test team
- Discovered bit overflow in aircraft temperature sensor by unit testing bit manipulation, requiring recall of faulty navigation systems
- Coded an ARIMA model for denoising accelerometer signal input, isolating original signal with 99% accuracy after 100ms

Northrop Grumman, Woodland Hills, CA May 2020 - August 2020
Software Engineer
- 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

PROJECTS

IBM: Subscription Service Churn Prediction — *Data Scientist*, San Francisco, CA January 2024
- Identified key churn drivers in subscription service data through EDA, feature engineering and supervised learning, leading to recommendations to reduce churn by matching competitor pricing and promote annual subscriptions in high-churn zip codes
- Selected Gradient Boosting over Random Forest, CART and Logistic Regression classifiers to predict churn with 83% ROC-AUC

Gabrielson & Company: Financial Check OCR Tool — *Data Scientist*, San Francisco, CA March 2021
- Automated financial check filing for family-owned bankruptcy accounting firm, extracting key details from checks with 89% accuracy using Kaggle financial check dataset, PyTesseract and OpenCV OCR, eliminating 5 hours of manual filing work per week

USC ISI: NASA CubeSat Satellite Build — *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 future 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