

- ❖ **Core Skills:** fine-tuning LLMs, integration, web scraping, migrations, API development, automation, leadership/HR, system administration
  - ❖ **Core Languages:** Python, SQL, HTML/CSS/JS, C#, DataWeave, but have used many other languages from Bash, to Swift, to C/C++, and more
  - ❖ **Environments:** experienced with AWS (preferred), Azure, and GCP, as well as MacOS (preferred), Windows, and Linux
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#### EDUCATION

##### Bachelor of Science in Business Administration

Emphasis in Management  
The W.A. Franke College of Business  
Northern Arizona University, 2016

##### Bachelor of Science in Computer Science (GPA 3.46)

Two-year Post-baccalaureate Program  
School of Electrical Engineering and Computer Science  
Oregon State University Ecampus, 2020

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#### EXPERIENCE

##### FARRAN MEDIA DBA DENTALTOWN (IN-OFFICE, FAMILY COMPANY), Phoenix, Arizona

September 2023 to August 2025

**AI DEVELOPER TO IT DIRECTOR TO PRESIDENT:** initially built an LLM, but promoted 2x to rebuild IT infrastructure & automate processes  
**Technology:** React Native, Python, MS SQL, 3rd party AI tools, AWS (primarily API Gateway, Lambda, RDS, DynamoDB, S3, SES)

- ❖ **Text-to-text Dental LLM/AI:** Built the largest dental text dataset, with 2.2 million training samples harvested from 25+ years of Dentaltown data and magazine articles, PubMed studies going back to 1840, multiple textbooks, podcast/CE transcripts, ADA/BLS data, and more
  - Labeled and legally harvested training data using SQL, web scraping, SFTP, transcription services, manual methods, and more
  - Preprocessed training data to optimize LLM behavior, and built an internal tool for managing and cleaning the training samples further
  - Fine-tuned (trained) LLM with HuggingFace/PyTorch/CUDA, but after implementing, decided to use [Together.ai](https://together.ai) for cost/time reasons
  - Built API to manage chat history, leverage a custom targeted advertising system, provide RAG data, personalize the UX, and more
- ❖ **IT Infrastructure Rebuild:** After building the LLM, I expressed concerns about the IT infrastructure as it related to declining engagement, network traffic, and internal processes, and was asked to restructure the company and rebuild both frontend and backend systems, plus infra.
  - Modern, cross-platform React Native frontend; scalable, serverless Python backend; cost-effective, state-of-the-art CICD & infrastructure
  - Built custom solutions: search engine, digital ads system, instant group messenger, secure token auth. system, robust notifications (web sockets, APN/CFM, email), hundreds of backwards compatible API endpoints and stored procedures, and more
  - The most challenging aspect was no documentation & backwards compatibility with the legacy system, as it is being redesigned in phases
  - Numerous department functions were automated using “AI function calling”, Selenium, Python, and other tools to reallocate labor

##### PERSONAL PROJECT, Goodyear, Arizona

May 2023 to September 2023

**FULL STACK DEVELOPER:** After first using ChatGPT in early 2023, I was blown away and felt compelled to attempt a start-up

**Technology:** Python, Flask, HTML/CSS/JS, MySQL, MongoDB, REST APIs, AWS (primarily SQS, SES, S3)

- ❖ **Cap'n Chat (capnchat.ai):** The first ever online AI group chat platform, where more than one user and more than one AI model could chat through a single interface, playing text-adventure role playing games, integrating three text-to-text and three text-to-image LLMs
  - The frontend and backend were built with Python and Flask, along with MySQL, MongoDB, and a plethora of AWS services
  - Integrated GPT-3.5 Turbo, GPT-4, & PaLM 2 Bison for chats, DALL-E 2, Stable Diffusion, & Midjourney for avatars & image messages
  - 300 users signed up without any real marketing aside from a few posts on Twitter, but it became clear we needed custom LLMs to facilitate the type of roleplay content that people were interested in, which lead me to pursue a position at Farran Media where I fine-tuned an LLM

##### MEDLAB2020 (MOSTLY REMOTE), Irvine, California

August 2022 to May 2023

**SENIOR SOFTWARE DEVELOPER:** Replaced a Python backend with .NET for resulting COVID tests and reporting them to state and federal governments and insurance agencies. Also replaced a MySQL backend with an improved schema, and then successfully completed an extensive data migration, with four million parent records migrated, each with 10-15 child records

**Technology:** .NET, HTML/CSS/JS, MySQL, MongoDB, REST APIs, RabbitMQ, HL7, Azure, AWS

- ❖ **Data Migration:** .NET project to migrate partial data from three MongoDB sources, thousands of CSV/Excel files, a legacy MySQL database, as well as an LIS API into a new MySQL database in order to unify the company's data and simplify generating reports and investigating patient records, done at my suggestion as the prior systems were a pain point for developers and a bottleneck for other employees when it came to answering basic questions about an MRN (medical record number)
  - The previous database was too rigid, not allowing for new clients or test types to be created, and so we created a more abstract and flexible schema, with numerous mapping tables and an audit trail using triggers, and an internal tool for searching records
  - Migrating over 50 million records was rushed to meet government regulatory mandates, and so the migration was broken across 12 machines (virtual and physical), each implementing 8 threads and serving up to 25K records per hour
- ❖ **.NET Backend Automation:** The company's backend used three dependent Python projects, which were never designed but added to overtime as new features were needed, and were written by employees before me who were learning to code as they went, and so it was quite challenging to work with, leading me to write two .NET solutions to replace the existing systems, designed to be flexible and user-friendly for developers
  - Projects ingested JSON data from RabbitMQ, enriched and saved data to MySQL, MongoDB, and CSV files, emailed results to patients, and delivered HL7 files to S3 for government & insurance compliance, and could be managed/monitored via API
  - Projects logged an audit trail, so questions as to why or what an app did could be answered in detail
  - Great effort went into ensuring the applications could encounter exceptions without going offline, log error data to multiple systems, notify parties when failures occurred, reattempt processing on a nightly timer, and be easy to debug
- ❖ **Miscellaneous:** I also built a few APIs paired with GUIs for searching databases and generating PDFs, helped with their call center's MS Access database, and received daily tasks investigating records or gathering data for departments

APISERO, Chandler, Arizona

October 2021 to July 2022

**LEAD ENGINEER:** MuleSoft subcontractor, responsible for designing, implementing, and documenting cloud integration solutions for clients.**Technology:** MuleSoft, DataWeave, MS SQL, MySQL, REST APIs, IBM MQ, HL7, MLLP, Anypoint Cloud Platform, CI/CD Pipelines❖ **Cambridge Investment Research (client):**

- Lead weekly C4E meetings and delivered presentations to executives to educate them on the company's architectures and ongoing projects
- Created company-specific documentation on the Anypoint Platform and MuleSoft best practices

❖ **Quest Diagnostics (client):**

- Integrated APIs across all levels of MuleSoft's 3-layer architecture, converting and securely transferring HL7 messages across the company's internal systems over MLLP and HTTPS with SSL/TLS, and also using IBM MQ, Anypoint MQ, and MS SQL Server
- Used highly configurable properties file, so adding/updating target systems could be done without altering code

❖ **Internal Work:** Received the CEO's weekly *FriJay Award*

- Created and maintained multiple AWS accounts and OUs for internal projects, developed custom security policies, maintained internal wikis and how-to documents, and supported other developers in troubleshooting errors
- Mentored interns one hour a day for *Sero Social Impact*, which is a philanthropic effort aimed at kickstarting the careers of new developers
- Created a technical exercise for hiring prospects as well as interviewed employees for various roles

SPARKLIGHT (FORMERLY CABLE ONE), Phoenix, Arizona

June 2020 to October 2021 (2-month gap between internship and FT)

**SOFTWARE ENGINEER I:** Full-stack work building GUIs, APIs, and backend automation programs**Technology:** .NET, HTML/CSS, JavaScript, Bootstrap, MS SQL, Azure, CI/CD Pipelines

- ❖ **Emergency Broadband Benefit API:** Created web services using .NET and MuleSoft, securely collecting and storing customer data in compliance with USAC, which was sent to the government's NLAD/EBBP API so customers could receive state-sponsored discounts
- ❖ **IIS Log Loader:** .NET application for ingesting IIS network traffic log files across company servers
- ❖ **Wells Fargo Check File Tool:** SOX compliant .NET application for sending CSV check files to Wells Fargo for payroll processing

**SOFTWARE ENGINEER INTERN:****Technology:** Python, Flask, Angular, HTML/CSS, JavaScript, SWQL, OpenShift

- ❖ **Multi-Router Traffic Grapher app:** GUI for displaying network traffic data, using Python, Flask, HTML/CSS, JavaScript, and Chart.js
- ❖ **Video Chat Tech Support app:** Assisted validation & error handling for a .NET Angular application, plus migrated the codebase to OpenShift

CFM (CASH FLOW MANAGEMENT), Tempe, Arizona

Oct. 2019 to Dec. 2019

**SOFTWARE DEVELOPER INTERN:** Developed frontend and backend for a QA automation tool for the company's QA process.**Technology:** Java, Wicket, HTML/CSS, JavaScript, Selenium❖ **QA Automation Tool:**

- Implemented parallelization logic so multiple cash/coin dispensers could be tested at once, each with its own automated browser session
- Worked closely with the QA department, spending three weeks completing manual regression testing to familiarize myself with processes

NON-DEVELOPER EXPERIENCE

2011 to 2019

- ❖ **Dish Network:** Promoted from Customer Service to Technical Support to "Welcome Team" to Samsung Triage within six months
- ❖ **Dish Network:** Received the "Tuned Into You" customer service award, and left after landing my first software developer internship
- ❖ **Farran Media:** Recorded, produced, & promoted 1,000+ hours of podcast episodes, targeting dentists and healthcare professionals
- ❖ **Farran Media:** Recorded and produced an audiobook for the international bestseller on Amazon, *Uncomplicate Business*
- ❖ **NAU Bookstore:** Received MVP recognition two seasons in a row for customer service and helping the store reach technology sales goals
- ❖ **NAU Bookstore:** Became an Apple Products Professional and won an internal competition to sell the most products attached to AppleCare

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**MORE PERSONAL PROJECTS**

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- ❖ **Roleplay Chat Harvester:** Created a system to harvest roleplay chats to gather training data for a custom LLM for roleplay, so I created a profit-sharing system where participants email each other and then the emails are harvested using the GCP API and formatted into JSONL files.  
**Technology:** Python, GCP API
- ❖ **Dino Firefighter:** Created an educational children's game, teaching numbers, letters, and shapes. **Technology:** Godot, Google AdMob
- ❖ **Magic Carpet Cat:** Created a Unity 3D game with 20 levels, but I became too busy with work to finish and release. **Technology:** Unity 3D
- ❖ **JinMee:** Published a side-scrolling iOS game. **Technology:** Swift, Objective-C, Google AdMob
- ❖ **Cosmic Greens:** For three months I grew and sold microgreens to two sushi restaurants, but became too busy juggling it with work and family
- ❖ **Split Splat Sploot:** Wrote and published a children's book through Amazon (<https://amazon.com/Split-Splat-Sploot-Mr-Mu/dp/B0BHL4TBP2>)