

TROY FULTON

Fort Worth, TX

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EDUCATION

Texas A&M University, College Station, TX
Bachelor of Science in Computer Science, Summa Cum Laude
University Honors and Engineering Honors
Minors in Embedded Systems Integration and Mathematics

May 2020
GPA 4.0

EXPERIENCE

Aspen Insights, Fort Worth, TX

June 2020 - Present

Software Engineer / Senior Big Data Engineer / Director of Data Engineering and Infrastructure

- Lead a team of engineers through cross-functional engagement with clinical staff to streamline recruitment
- Architect and deploy scalable, secure Big Data infrastructure using Kubernetes, Terraform, Spark, and Delta Lake
- Build and maintain HIPAA-compliant data integrations with health systems (15+ external and a few internal)
- Enable AI-driven solutions, including free text deidentification workflows using NER models, LiteLLM, and Langchain
- Kickstart operational insights and cost analysis by building a data lake for many internal BI use cases
- Contributed to projects across teams, practicing dockerization, DevOps and CI/CD, and Vue.js/Django development

Texas Instruments- Embedded Processing, Sugar Land, TX

May 2019 - July 2019

Software Engineering Intern, Compiler Team

- Improved performance of C7000 DSP architecture compiler to improve compatibility with C6000 legacy code
- Improved overall compiler performance via software pipelining vectorization as measured by system kernels in OpenCL

Lockheed Martin Enterprise Business Services, Grand Prairie, TX

May 2018 - August 2018

Applications Intern

- Engineered solutions in SAP HANA Extended Services for corporate database operations
- Applied knowledge of SQL & RDBMS to JS, as well as Python web scraping and beginner R forecasting

Texas A&M University Engineering, College Station, TX

August 2017 - May 2020

Peer Teacher (2017-2018) and Supervisory Peer Teacher (2018-2020)

- Fostered engineering mindsets and mentored freshman engineers to think algorithmically 10-20 hours per week

RESEARCH

Undergraduate Research Scholars Program, Texas A&M University

August 2019 - May 2020

Undergraduate Researcher

- Investigated techniques for parallelizing and optimizing Active-Routing in On-Chip Interconnection Networks
- Produced a written undergraduate thesis for publication and presented a poster at a University-wide event
- Published in 2021 in *IEEE Transactions on Computers*

SKILLS

Proficient	Data Engineering, Spark, Python, Delta Lake, Kubernetes (AKS), Terraform (IaC), Azure, SOLR, Redis, RabbitMQ, SQL, Trino
Moderately Proficient	LangChain, LiteLLM, Docker, Databricks, Django, Vue.js, C/C++, Microservices, Java, Linux
Moderate Knowledge	gRPC, R, C#/.NET, MATLAB, Haskell, x86/ARM/MIPS assembly, Unreal Engine

HONORS

2024 High Performer Award, Cedar Health Research / Aspen Insights

March 2025

Runner-up Smartcar API Integration Award, TAMUHack 2019 via Smartcar

January 2019

IAP Scholarship, Texas A&M University Industrial Affiliates Program

June 2018, 2019