

Michael Amberg

ML specialist aiming to leverage technical skills to provide value to clients across industries

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PROFESSIONAL SKILLS

Programming Languages: Java, Python (scikit-learn, tensorflow, pandas), C++, R-Studio, SQL

Cloud Systems: Microsoft Azure, Amazon Web Services

Personal Skills: Writing, Team Leadership, Creative Thinking, Humor, Presenting, Problem-Solving, Adaptability

Achievements: Eagle Scout, SMU Academic Honors

EDUCATION

Southern Methodist University | Dallas, TX

M.S. in Computer Science Specialization in Artificial Intelligence and Machine Learning

May 2024

B.A in Computer Science - Honors

May 2023

Victoria University | Wellington, New Zealand

February 2020 - June 2021

Software Engineering

Relevant Courses: Machine Learning, Natural Language Processing, Cloud Computing, Artificial Intelligence, Software Architecture, Data Mining, Algorithm Engineering, Statistics, Quantum Informatics, Engineering Communications

PROFESSIONAL EXPERIENCE

Data Science Intern | Docket Navigator | Abilene, TX

May 2023 - May 2024

- Full time position creating new pages for Docket Navigator website, using python and plotly to generate dynamic graphs on litigation data.
- Spearheaded SQL generation project, having positive feedback so that they may pursue the project in the future.

Data Science Intern | Dialexa | Dallas, TX

May 2022 - August 2022

- Worked on Property Appraisal Predictor project, and collaborated on software project for desk reservation system.
- Presented data portion of desk reservation project to entire company. Presented data science project to senior team of data scientists to show findings and get professional feedback.

PROFESSIONAL PROJECTS

Novel SQL Query Generation with LLMs for Docket Navigator

April 2024

- Self-directed project for exploring possible methods to generate novel SQL based on natural language questions. Investigated fine-tuned LLMs and custom GPT options to reliably fetch data using generated SQL queries based on customer asked natural language questions regarding litigation information.

Enhancement of Retrieval-Augmented Generation Models using Knowledge Graphs - SMU

April 2024

- Developed and integrated advanced coreference resolution techniques and knowledge graphs into a Retrieval-Augmented Generation (RAG) model to improve temporal accuracy and entity linking capabilities. Results surpassed traditional vector database approaches in handling dynamic and contextually complex queries while utilizing far less computational resources.

Property Appraisal Predictor for Dialexa

July 2022

- Extracted public data to train an XGB model on AWS, classifying if a property's appraisal could be appealed. Modeling showed 65 million in tax savings for Dallas companies. Presented findings to senior Dialexa team.

Autonomous Robot Project - SMU

September 2021

- Employed SCRUM methodology to design, build, and program an autonomous robot that could perform specific tasks. Personally led each SCRUM meeting and designed/built the robot while project team leader.