

EDUCATION

Master of Science, Computer Science, University of Texas at Austin, GPA: 3.92 **Sep 2022 — Aug 2024**

Bachelor of Science, Data Science, Simon Fraser University, GPA: 3.87 **Sep 2018 — Dec 2021**

Selected Coursework: Deep Learning, NLP, Algorithms, Android Programming, Reinforcement Learning, Operating Systems, Data Structures, Databases

PUBLICATIONS

Thomas, D. and Varghese, J., **Survey of Generative AI in Code Generation: Privacy, Security and Ethical Considerations**.
International Journal of Scientific Research and Engineering Trends, 10.4:(2024), 1518-1526

Thomas, D. and Varghese, J., **Improving Financial Sentiment Classification on ELECTRA using Adversarial Attacks**
International Journal of Scientific Research and Engineering Trends, 9.6:(2023), 1759-1764

Thomas, D. and Varghese, J., **Forecasting S&P 500 Index Closing Price using LSTM and FinBERT**
International Journal of Scientific Research and Engineering Trends, 9.5:(2023), 1437-1445

PROJECTS

Software Projects

- Social Media Android App With Real-Time Interactive Feed, Firebase Authentication, and Storage (Kotlin/Java, Firebase, Firestore)
- Multi-Threaded Chat Application in C With Signalling and Mutex Locks (Makefile, pthread)
- E-Commerce Web App (HTML, CSS, Django, Docker, API, PostgreSQL) & SMS Photo Sharing (Vue.js, Javascript, Twilio, Postman)
- Music Player With Playback, Navigation, Shuffle, and Customizable Settings (Android Media Player API, Kotlin/Java, Coroutines)

Machine Learning/ Deep Learning Projects

- Multi-Agent RL and Vision-Based Controllers for Self-Driving Vehicles in Ice-Hockey Simulations (PyTorch, DDPG, TD3, U-Net)
- Text Sequence Prediction with Multi-Head Self-Attention Transformers (PyTorch, NumPy, Hugging Face)
- Fact-Checking with Word Overlap and Textual Entailment Models Based on DeBERTa-v3 (PyTorch, TF-IDF, NumPy)
- Classifying Book Reviews Using Natural Language Processing (NumPy, Pandas, Matplotlib, scikit-learn, NLTK, TF-IDF, VADER)

Data Visualization Projects

- Power BI Sales Dashboard
- Real-time Crime Looker Dashboard
- Climate Change Shiny R Dashboard

EXPERIENCE

Revenue Operations Data Analyst/Engineer, OpenText Corporation **Jan 2022 — May 2022**

- Created complex queries, views, stored procedures** using SQL and performed distributed analytics using GPU (**Rapids + Pandas**) to meet reporting requests.
- Automated data pipelines in Gitlab** using Pandas, Boto3 and **AWS S3, Athena, Glue and Redshift** to perform Extract, Transform, Load (ETL) jobs which upload data to S3, transform it to star schema with AWS Athena and load with Glue to Redshift.
- Developed dynamic dashboards** linking **Redshift to Tableau**, tracking KPIs for operations, sales & revenue for the Canadian Region.

Data Analyst, Sierra Wireless **Sep 2020 — Apr 2021**

- Developed dashboards with Qlik and Power BI (DAX)**, delivering presentations to both technical and non-technical audiences, including upper management. Improved business performance by identifying gaps **resulting in a 15% cost reduction**.
- Developed ETL packages** with SQL Server Integration Services (**SSIS**) and created stored procedures, views for manipulating large tables (>5 million records) using advanced **T-SQL** queries.
- Authored user guides for reports on Confluence** and collaborated with Agile teams using **JIRA**.
- Automated retrieval of customer data** from AWS S3 and FTP Server and uploading to database using Python (Boto3), eliminating daily manual downloads and uploads saving 8 manhours per employee per week.

SKILLS

Programming	Python (NumPy, Pandas, Scikit-learn, Matplotlib), Kotlin, Java, SQL, R, C, HTML/CSS
Tools/Frameworks	PyTorch, Linux, Git, VS Code, AWS, Android Studio, PostgreSQL, Microsoft SQL Server, Microsoft Excel
Data Visualization	Tableau, Power BI, Looker Studio, Shiny R, Qlik, Microsoft SQL Server Reporting Services

RECENT AWARDS & HONORS

Data Science Award, Simon Fraser University **2022**

- Given to one outstanding graduating student for academic excellence, leadership, and contribution to the program or university