Cal C. Elwer

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EXPERIENCE

Cognira - AI Startup **Atlanta, GA**
Data Scientist - Part-Time Contract May 2022 – August 2022

- Developed a robust algorithm using Python and PySpark to estimate lost sales due to stockouts in the retail industry
- Conducted comprehensive Exploratory Data Analysis (EDA) and data preprocessing on a vast dataset of 40 million records, incorporating inventory, sales, location, and product data
- Achieved an accurate estimation of $18 million in lost sales over a 2-year data period, surpassing baseline model accuracy by 10%
- Automated the lost sales estimation process for any retailer's data using PySpark scripts, ensuring streamlined future analyses
- Garnered client interest for potential model adoption, positioning it as a tool for superior forecasting and impactful business assessments

Kaleris **Atlanta, GA**
Lead Systems Integration Consultant August 2021 – March 2023

- Spearheaded the integration practice for a leading cloud-based Yard Management System in the supply chain industry
- Responsibilities encompassed pre-sales solution engineering, system design, testing support, and production deployment
- Managed and executed over 30 projects for mostly fortune 500 clients spanning retail, grocery, manufacturing, and automotive sectors
- Scaled the integration service to accommodate a 25% year-over-year increase in product demand and trained a team to support projects
- Implemented logic through APIs (HTTPS/AWS SNS-SQS) to optimize container flow in manufacturing and distribution centers, resulting in substantial time savings for clients and an average 15% throughput improvement

Manhattan Associates **Atlanta, GA**
Senior Software Consultant January 2019 – June 2021

- Gathered requirements and created solution design as the lead consultant during a design phase for a fashion retail company
- Served as lead consultant for PacSun-Eddie Bauer's Warehouse Management (WM i-series) Direct to Consumer sorter upgrade
- Addressed critical production inefficiencies during an implementation and devised a custom allocation algorithm and slotting optimization process utilizing SQL, ultimately resulting in a 20% increase in throughput
- Applied SQL coding best practices to build dashboards, test functionality, modify databases, and triage issues for a diverse range of clients

Tesla **Fremont, CA**
Process Engineering Internship May 2018 – August 2018

- Designed and implemented the Model S & X Battery Remanufacturing line to operate on a single 10-hour shift instead of two 10-hour shifts, reducing labor costs by over 20% ($800,000/year) by optimizing each step in the battery remanufacturing process

ViaSat Inc. **Carlsbad, CA**
Operations Internship May 2017 – August 2017

- Characterized a modem testing process and identified optimal process flow through value stream mapping
- Created simulations (Simio) of multiple test engineering processes to identify bottlenecks and quantify changing resources

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY | Atlanta, Georgia Graduated December 2022
Master of Science in Analytics – Computational Focus **Overall GPA: 3.92**
GEORGIA INSTITUTE OF TECHNOLOGY | Atlanta, Georgia Graduated December 2018
Bachelor of Science in Industrial and Systems Engineering **Overall GPA: 3.73**
Awards: Industrial & Systems Engineering Spring 2018 Capstone Competition – 1st/31 Place

- Collaborated with a team to redesign Textron's TUG Tractor manufacturing process, resulting in a 50% ($20M) throughput improvement
- Re-balanced the manufacturing line via optimization (CPLEX) and verified the design with a simulation model (Python)

Projects

Wind Power Forecasting

- Created an RNN (Recurrent Neural Network) using Python/Pytorch to predict the energy produced by a farm of 134 wind turbines
- Data provided by the Baidu KDD Cup competition with 245 days of data, consisting of 13 columns with 4.75 million records
- Achieved 96% accuracy with the RNN model on the competition's test data set and outperformed baseline naive moving average forecasts

Research Paper Recommender

- Explored NLP methods using Python to recommend Arxiv research papers based on abstract relevance
- Created embeddings using NLP models, FIDF(Term Frequency Inverse Document Frequency), and sentence transformer 'distilroberta'
- Utilized a similarity matrix to identify the most similar research papers to a parent paper, and assessed the results with user feedback

SKILLS

Software: SQL, Python, R Studio, Tableau, Spark, AWS, GCP, Azure, Minitab, JIRA, CPLEX, Xpress, SIMIO, Postman

Modeling: Regression, KNN, K-means, PCA, SVM, Random Forest, Monte Carlo Learning, Neural Networks

Additional Skills*:* product design, issue triaging, technical architecture writing, product demos, product training, API's

Key Courses: Machine Learning, Reinforcement Learning, Deep Learning, Data & Visual Analytics, Computing for Data Analysis, Analytics Modeling, Optimization, Simulation, Business Analytics, Regression & Forecasting, Supply Chain Modeling, Supply Chain Economics, Database Systems, Stochastic Manufacturing & Service Systems, Finance and Investments, Financial Modeling

Interests: Backpacking, Triathlons, Travel, Mindfulness, Algorithmic Trading