ZAKI S. AHMED

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SUMMARY

Innately curious to find the truth underneath the data. Comprehensive understanding of the data/ML process from ETL to advanced analysis and model deployment making me uniquely suited to tackling any data-driven problem.

EXPERIENCE

Data Science Researcher   October 2023-Present
UC San Diego   *San Diego, CA*
- Collaborated with a six-member team conducting ablation study on predictive performance strategies on enterprise scale tabular time series data in the context of credit risk modelling on millions of housing loan datapoints
- Engineered a credit default risk model that outperformed traditional credit default prediction models by 13% and packaged code into open-source package, published to the PyPi repository ("RiskNet")
- Used Kubernetes-based cloud platform and custom Docker containerization for consistent development environment
- Led exploratory data analysis by creating custom visualization dashboards streamlining future development for team
- Implemented sliding window data query by engineering dynamic data load pipeline for more efficient analysis
- Implemented distributed hyperparameter search using Ray API for 10% runtime speedup and 2% performance uplift

Brand Representative Lead   January 2020-Present
Abercrombie & Fitch   *San Diego, CA*
- Upheld store standards with a customer-centric approach, enhancing overall customer experience and satisfaction
- Trained new hires and facilitated their ongoing performance ensuring they were best equipped to perform their duties
- Oversaw logistical operations of store including shipments, merchandize organization, and replenishment

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EDUCATION

University of California, San Diego   Sept 2020 - Dec 2024 (Expected)
B.S. Data Science, B.S. Cognitive Science- Specialization in Machine Learning
> **Relevant Coursework:** Unsupervised and Supervised ML Algorithms, Data Visualization, Database Systems, Systems for Scalable Analytics, Neural Networks and Deep Learning, Business Analytics

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PROJECTS

Supplanting Machine Learning Performance with Data Simulation   September 2022 - Present
- Investigated impact of supplanting dataset of vehicle performance with simulated data on predictive performance
- Collected, scraped, and verified 1500+ data points to create custom dataset of both simulated and real vehicle data
- Compared regression performance to predict lap time between various combinations of simulated and real data

Predicting H1-B Visa Certification   January 2023 - March 2023
- Led team of 4 to develop and compare performance of 4 predictive models to classify H1-B Certification
- Designed and developed Data Cleaning and Machine Learning pipeline used by rest of team
- Streamlined model comparison process to facilitate performance evaluation across models and partitioned datasets

Predicting Craigslist Used Car Prices Using Machine Learning   March 2023
- Performed exploratory data analysis on factors influencing used car prices from 400,000 Craigslist listings
- Built, tuned, and tested 5 price prediction models using 21 selected features pulled from each listing

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SKILLS

Technical
> **Machine Learning:** Classification, Regression, Clustering, Feature Engineering, Recommendation Systems, Ablation Analysis, Deep Learning, Model Optimization, Ensemble Learning
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> **Data Engineering/Analytics:** ETL, Database Design, Data Mining, Data QA, Visualization
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> **Statistics:** Inferential and Descriptive Statistics, Hypothesis Testing, A/B Testing, Bayesian Methods

Software
> **Proficient:** Python (scikit-learn, Ray, Dask), Pytorch, SQL (PostgreSQL, MySQL), AWS, Kubernetes, Docker, Git, R, MATLAB, Java, JavaScript, D3.js, HTML/CSS Microsoft Office, Tableau, PowerBI, Seaborn, LaTeX
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> **Familiar with:** Azure, GCP, Tensorflow, RESTful API, Linux/UNIX, Apache Spark/Hadoop