NISAL PERERA

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PROFESSIONAL EXPERIENCE

Machine Learning Engineer Mar 2023 - Present
Expedia Group, Seattle (Remote)

- Developed and deployed highly scalable services to handle thousands of inferences per second.
- Reduced costs by migrating legacy models into K8 based BentoML model deployment platform.
- Implemented a Kafka based model request/response logging service for model monitoring.
- Integrated and optimized a DynamoDB Feature Store for realtime feature look up at inference.
- Streamlined live inference services, cutting costs by 40% while preserving the same SLAs
- Utilized GitHub Actions and Spinnaker to automate model training and CI/CD pipelines.

Sr. Machine Learning Engineer Jan 2021 – Feb 2023
Telus Communications Inc., Toronto

- Built a fraud model to prevent 20% of in store device fraud resulting in $4M savings annually.
- Debugged and fixed production models using data drift analysis and model monitoring tools.
- Developed propensity models for various churn, up-sell, cross-sell Telus marketing campaigns.
- Increased team efficiency by migrating ML workflows to Vertex AI and BigQuery on GCP.
- Collaborated with business stakeholders to identify and prototype new AI initiatives.

Data/ML Engineer Jan 2018 – Dec 2020
The Weather Network, Oakville

- Built an end-to-end predictive system to estimate ad click-through rate (CTR) using XGBoost.
- Implemented a behavioral segmentation algorithm in PySpark ML for personalized ad targeting.
- Developed ETL pipelines in Google Dataflow to extract insights from sparse geospatial data.
- Modelled data in Elasticsearch and Redshift databases to meet real-time querying requirements.
- Implemented Python Flask back-end microservices using AWS Lambda/API Gateway/Zappa.
- Maintained an Apache Airflow server for coordinating and scheduling ETL pipeline jobs.

Data Science Engineer May 2017 - Dec 2017
Rubikloud Technologies Inc., Toronto

- Worked with data scientists to build a personalized retail product recommendations model.
- Developed scalable machine learning and data processing pipelines in PySpark on AWS EMR.
- Productized machine learning models into robust production-grade systems using Luigi.
- Deployed machine learning solutions on AWS cloud services using Docker containerization.
- Built an automated testing and validation tools for verifying the quality of model predictions.

EDUCATION

MSc in Applied Computing Sep 2016 – Dec 2017
University of Toronto
Thesis: Using machine learning to optimize a cloud workflow management system.
Awards: Mitacs Accelerate Fellowship Grant ($15,000)

BASc Computer Engineering, Honours Sep 2011 – May 2016
University of Toronto
Awards: Dean's Honours List, University Entrance Scholarship