Ahad Chaudhry

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Work Experience

Machine Learning Engineer at Microsoft, Seattle WA **Sep 2020 – Present**

- Demonstrated leadership and expertise by giving talks to audiences of 250+ internally on Causal Inference and Differential Privacy and exceeded average engagement rate by 20%.
- Leveraged ensemble-based models, SHAP, and causal forests to build a generic causal inference pipeline for determining causal effect of collaboration and co-pilot metrics on success outcomes within 10 percent of A/B testing results.
- Trained, tuned, and deployed a random forest classifier to predict important features for several synthetically generated outcomes to identify top behavior metrics for determining success in organizations.
- Implemented a laplace-based differential privacy algorithm using discretization and rounding techniques, protecting sensitive data in reports with flexible date ranges and filters which yielded a 10% increase in customer onboarding.
- Led efforts to resolve critical differential privacy issues in data processing frameworks like Spark and cloud services such as Azure Analysis Services, improving data accuracy for small datasets and enabling 40% more groups to be analyzed.
- Introduced the detonation chamber workflow for running eyes-off experiments to team which streamlined workflows and shortening feedback loops from several hours to a few minutes, leading to enhanced developer efficiency and collaboration.
- Won companywide hackathon demonstrating benefit of integrating Viva Goals with Viva Insights and presented to EVP Kathleen Hogan alongside team.
- Spearheaded the development and deployment of two iterations of a recommendation model, resulting in an increase in click-through rates of more than 100% by targeting highly engaged users.
- Conducted in-depth analyses of product experiences such as virtual commute and no-meeting day, providing actionable insights that informed product feature improvements and optimized user experience by increasing CSAT and retention to 90%.
- Developed a comprehensive data analysis pipeline to evaluate user behavior for time management features that were used by Microsoft Research to publish papers landing in CHI 2023.
- Optimized cloud-based personalization service to reduce operational calls by 80% while maintaining a quality user experience.

Skills: C#, Python, SQL, Typescript, Azure, CI/CD, Spark, Azure Data Lake, Azure Machine Learning, EconML, SHAP, SKLearn, Git

Data Engineer at Activision, Vancouver BC (Canada) **May – Dec 2019**

- Worked in a team to deliver a new real-time data pipeline that ingests data from up to 4 million concurrent users playing Call of Duty Mobile and Call of Duty Modern Warfare in a matter of seconds
- Implemented and optimized production-grade Big Data micro-services running on AWS capable of ingesting petabytes of game data daily

Skills: Java, Python, Scala, SQL, AWS, Docker, Kafka, Hive, Spark, ELK Stack, Agile, Kanban

Data Scientist at Environment Canada, Vancouver BC (Canada) **May 2018 - May 2019**

- Decreased data ingestion time by a factor of 800 and built modern accessible web interfaces for data interaction with advanced search, pagination and graphing features
- Single-handedly developed several hi-performance ingestion scripts, machine learning models, and MVC web applications for running ingestion scripts and querying a SQL Server Database

Skills: Python, ML, SKLearn, Pandas, MVC, NumPy, C#, Javascript, jQuery, SQL, SQL Server, Agile

Project Experience

Human Real Time Video Segmentation using Images, SFU **Jan – Apr 2020**

- Trained and examined the performance of a PyTorch implementation of an E-Net model to segment humans in Real Time using the Pascal VOC Dataset with data augmentations

Skills: Python, Computer Vision, ML, PyTorch, Neural Networks, CNN, NumPy, Data Augmentation, Cross-Validation

ColourMe (Distributed Multiplayer Game), SFU **Jan - Apr 2019**

- Worked in a team of 4 to develop and design a game implementing distributed system characteristics using the JAVA FX framework and web-sockets protocol
- Achieved a perfect score through overseeing all aspects of the project design and implementation

Skills: Java, Java FX, Web-Sockets, CI, Concurrency, Synchronization, Fault Tolerance

Education

Simon Fraser University (SFU), Burnaby BC **Sep 2015 - 2020**

Bachelor of Science in Computing Science, Graduated 2020 *CGPA 3.36 (Last 4-Term GPA 3.59)*