William Cheung

Address: Hoboken, NJ / New York, New York

Email: wcheung5@fordham.edu **Website**: https://williamcheung94.github.io/

EXPERIENCE

Criteo; New York, N.Y   May 2021 – Present
Data Scientist

Day-to-day
- Build self-service reporting and performance insights into online video advertising campaigns (OVL and OTT) in order to help **grow client spend ~300% year over year** on upper funnel and full funnel tactics (Using Python, Bash, PostgreSQL)
- Support backend data pipelines and data migration, with dataflow job, and warehouse management for tasks such as **audience targeting**, complex **custom reporting**, and **supply data to other teams** for their analytics (Using Dataflow, Python, PostgreSQL, Cron, and MongoDB)
- **Review code** submissions on various database or automated tooling alterations (Using Gerrit)

Projects
- **Building A/B testing infrastructure**, joining internal processes with a newly acquired platform (IponWeb) to allow internal teams to conduct A/B tests
- Use **Natural Language Processing to classify app inventory type** and allow for better reporting and training data for bidding engine

Fordham University; New York, N.Y   September 2019 – May 2021
Graduate Researcher (Machine Learning)

- **Main Project - Using passive biometrics to continuously certify a user with multiple devices** (*Implicit continuous biometric authentication model using IoT wearables*) Initially testing with classical models (RF, KNN, SVM, NB) to artificial neural networks (CNN,RNN,CRNN) we've made a user authentication modeled for internet connected devices taking into account Heart Rate, Gait, and Breathing with accuracy of 97%. For implementation I've **built a full-stack system incorporating a custom Fitbit application front end to a computational back-end android app with server interaction** [JavaScript: Fitbit and server, java: android app, python: feature computation and model decision generation] of the authentication model
- **Secondary Project – User Location Prediction in Absence of** GPS (Point of Interest identification) study using machine learning with 95% accuracy

National Grid; Brooklyn, N.Y   June 2016 – September 2019
Financial Analyst

- Automate system batch entries using VBA and SAP to **reduce manual entries by 15%** and speed up the monthly accounting process by an additional work day
- Analyze financial information during month end close for the National Grid subsidiary, Narragansett Electric Company and work with business partners to accurately establish cost capture methods for recovery of over $10 billion

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EDUCATION

Fordham University (N.Y., N.Y.)   Graduated - Dec. 2020
M.S in Data Science (GPA: 4.0)

Stony Brook University (Stony Brook, N.Y.)   Graduated - May 2016
B.S. in Applied Mathematics and Economics [Double Major] (GPA: 3.6)

PUBLICATIONS

- Cheung, W and Vhaduri, S "Continuous Authentication of Wearable Device Users from Heart Rate, Gait, and Breathing Data" IEEE RAS/EMBS International Conference on Biomedical Robotics & Biomechatronics *https://arxiv.org/abs/2008.10779*
- Cheung, W and Vhaduri, S "Context-Dependent Implicit Authentication for Wearable Device User" IEEE International Symposium on Personal, Indoor and Mobile Radio Communications *https://arxiv.org/abs/2008.12145*
- Cheung, W and Vhaduri, S "Multi-modal Indirect Authentication Using IoT Wearables" (pending)