Evan Pai

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WORK EXPERIENCE

Software Engineer · Thomson Reuters   **Jan 2021 – Aug 2021**
- Built a HTML content extraction system for use in a fake news detection pipeline by cross-referencing results from multiple Python libraries
- Extended the backend of an automated curated newsletter, informing subscribers of relevant industry trends while logging user engagement using AWS, Flask, and SparkPost
- Evaluated and documented machine learning methods for parsing and extracting HTML content
- Developed Python scripts to manipulate metadata and ensure string validity, supporting a facial recognition and image captioning pipeline

Data Science · Statistics Canada   **Sep 2019 – Dec 2019**
- Developed Python tools for a standardization of English and French metadata variables using Natural Language Toolkit to reform variables from a many-to-many relationship to a one-to-one relationship
- Managed a metadata database with 50,000+ entries and added components to automate procedures

Data Analyst · Statistics Canada   **Feb 2019 – Apr 2019**
- Predicted manufacturing times of operations for over 400 parts using regression, resulting in an optimized production schedule and projections of labour costs for all operations

PROJECTS

OnlyOne   **Present**
React Native + AWS real-time word game
- Facilitates real-time cross-device connections using AWS API Gateway WebSockets
- Adopts a serverless, scalable architecture leveraging AWS Lambda
- Optimizes costs through throttling, debouncing, and automatic clean-up timeouts for AWS DynamoDB

Memory Games ↗   **Sep 2023**
React Native memory game collection
- Applies graph theory concepts to dynamically generate random paths in a maze

ytSheetMusic ↗   **Mar 2023**
AWS EC2+S3, React. and Flask Web App to convert sheet music from YouTube URL to PDF
- Identifies and isolates regions of interest using OpenCV Contour Detection, merging results to PDF
- Prevents sheet music duplicates by calculating structural similarity index between images
- Reduced result processing time from ~1 minute to instantaneous output by caching images in AWS S3

EDUCATION

University of Waterloo   **Graduated 2022**
BMath, Honours Computational Mathematics with Distinction (3.7/4.0 GPA)
- Minor in Computing, Minor in Combinatorics and Optimization
- **Relevant Courses:** Object -Oriented Software Development; Data-Intensive Distributed Analytics; Neural Networks; Algorithm Design and Data Abstraction; Logic and Computation; Data Warehousing and Mining

SKILLS & INTERESTS

- **Languages:** Python; JavaScript; C; C++; R
- **Technologies:** SQL; React; React Native; AWS; GraphQL; Flask; NumPy; pandas
- **Interests:** badminton; piano (classical and jazz); reading; meditation; self-improvement