

David Duffrin

<https://www.linkedin.com/in/duffrind/> · david.duffrin@gmail.com

EXPERIENCE

Senior Software Engineer Uber

April 2021 - Present

- Tech Lead for On Demand Supply which is a forecasting model to predict driver deficit as a platform and work closely with external stakeholders
- Empower partner Organizations by creating a source of truth service to determine a driver's eligibility for different product types in different locations
- Through A/B experimentation we measured the impact of Estimated Time to Request to have an estimated revenue increase of \$30m per year
- Designed and led the Backend effort for Estimated Time to Request, working closely with Mobile Engineers and Applied Scientists
- Technologies used include Go, Scala, and Michelangelo - Uber's internal ML Platform
- Feature Pipelines created with Kafka & Flink and stored in Cassandra & Hive with caching in Redis
- Gave a Lightning Talk at Engineering Summit 2022 and Presented a Poster at UberML'22

Software Development Engineer Amazon

January 2019 - March 2021

- Engineer on Nessie - an event and action brokerage network
- Utilized Java, React, Kubernetes, Kafka, and Spark for the infrastructure
- Deployed Anomaly Detection techniques to automatically reduce product defects
- I created data visualization and exploration tools to analyze customer feedback

MLE Internship Epic Systems

2018

- Created a Convolutional Neural Network with word embeddings that predicts patient diagnoses given doctors' notes
- Utilized NLP and Machine Learning technologies including NLTK and SKLearn
- Used an auxiliary classifier for interpretability while retaining a deep network for accuracy
- Pipeline is written in Python using TensorFlow and Keras

NLP TA New College of Florida

2018

Intro to AI TA New College of Florida

2017

Software Engineer Coop Star2Star

2017

- Created a ChatBot for troubleshooting IoT devices with customers using NLP techniques
- Used Word2Vec and cosine similarity on internal documentation to cluster similar words
- Detected remote phone failures using Anomaly Detection techniques on Time-Series Data

PROJECTS

StudySubs SRS Flashcard Creator - <https://studysubs.com/>

- Flutter based WebApp that is also compiled for iOS and Android
- Users upload Japanese subtitles or ebooks to create personalized SRS flashcards
- A WebApp using Flutter/Dart, NodeJS Backend, and Google Firebase technologies
- Uses NoSQL database to maintain user data
- Uses a morphological analyzer to tokenize and conjugate Japanese text

Amazon MLU NLP

- Graduated from Machine Learning University
- Created a CNN Model incorporating NLP preprocessing techniques in the pipeline to detect bot created reviews as my Capstone Project

Intuition Behind Japanese Kanji - [Undergraduate Thesis](#)

- Researched probabilities using Bayesian Networks to estimate kanji pronunciation

EDUCATION

New College of Florida The Honors College of Florida

M.S. Data Science **GPA: 3.89**

B.A. Computer Science **GPA: 4.0 Honors**