Mark A. Fajet

Machine Learning Engineer

Aiming to work in a challenging position that blends my computer science and mathematics background to solve machine learning problems efficiently and creatively

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Work Experience

Software Development Engineer 2

Amazon, AWS Elastic File System

- Built recommender system using MLxtend for internal operations portal
- Integrated search engine for internal operation documents using Amazon Elasticsearch Service, Amazon S3, AWS Lambda, and AWS CDK
- Defined and collected metrics to be used for data analysis
- Participated in internal Machine Learning University

July 2020 – Ongoing — Remote from Miami, FL

Software Development Engineer 1

Amazon, AWS Elastic File System

- Implemented a web application using Flask and React for EFS operators to more easily triage issues, read runbooks, and view real-time metrics with 130 daily users
- Added multithreading, multiprocessing, and caching to a variety of existing tools which drastically improved performance by up to 94%
- Improved test coverage and practices with Jest, pytest, and Cypress
- Mentored interns and new hires during on-boarding and project completion
- Handled multiple large scale migrations of tools

June 2018 – June 2020 — Boston, MA → Remote from Miami, FL

Engineering Development Group Intern

MathWorks

- Carried out deep learning benchmarking in MATLAB, Tensorflow, Keras, and MXNet across multiple systems: CPU, single GPU, and multiple GPUs
- Conducted exploratory data analysis in MATLAB employing linear regression, K-Nearest Neighbors, decision trees, and SVM to diagnose long startup times

May 2017 – August 2017 — Natick, MA

Web Developer

Florida International University

- Built and managed websites using technologies such as Node, PostgreSQL, React, PHP, Angular, and Firebase

September 2015 – May 2018 — Miami, FL

Learning Assistant

Florida International University

- Assisted students with programming projects for courses that focused on assembly language, registers, binary, logic, circuits, caching, paging, multithreading, and GPU programming

August 2016 – May 2018 — Miami, FL

Awards & Certifications

- **Certifications** 14 Machine Learning certifications through Coursera listed on LinkedIn Profile
- **Outstanding Graduate Award in Computer Science**
  Florida International University, May 2018
- **Scholarships** FIU Ambassador Scholarship, Bright Futures Scholarship, FIU SGA STEM Scholarship
- **Best Artificial Intelligence and Machine Learning Hack, UHack 2017**
  devpost.com/software/neural-gonna-give-you-up

Education

M.S. in Computer Science

Florida International University, 4.0/4.0

August 2019 - December 2020 — Miami, FL

B.S. in Computer Science

Florida International University, 3.95/4.0

August 2014 - May 2018 — Miami, FL

B.S. in Mathematical Sciences

Florida International University, 3.95/4.0

August 2014 - May 2018 — Miami, FL

Skills & Technologies

- **Programming** Python, Java, C, CUDA, F#, Haskell
- **Machine Learning** Deep learning, Unsupervised learning, Supervised learning, Reinforcement Learning, Natural Language Processing (NLP)
- **ML & Data Engineering** Tensorflow, Keras, SciPy, scikit-learn, MLxtend, MXNet, NLTK, WordNet, GloVe
- **Python Libraries** NumPy, Pandas, Jupyter, Matplotlib, Numba
- **Testing Frameworks** pytest, mock, Jest, Cypress
- **Backend** Flask, SQL, Node.js
- **Frontend** HTML, CSS, JavaScript, React

Projects

Codenames DQN

- Created an OpenAI Gym environment of the boardgame Codenames to simulate the game play utilizing GloVe word vectors
- Trained a Deep Q-network with the goal of creating a model that can play and win the boardgame, consequently learning the multi-modal definitions of English words

Neural Gonna Give You Up

github.com/mfajet/Neural-Gonna-Give-You-Up

- Developed encoder-decoder recurrent neural network using Keras LSTM and dense layers to process MIDI song files to make them sound more like Never Gonna Give You Up by Rick Astley.

Rock, Paper, Scissors

- Built and trained a deep learning, image recognition model in MATLAB to determine if one is displaying rock, paper, or scissors in real time using transfer learning techniques.