GitHub
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CARL BARBEE

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SUMMARY

NYU Computer Science Master's student with a focus in ML. Experienced software engineer after 5 years at Qualcomm, working with C/C++/Python.

EMPLOYMENT

Senior Software Engineer   **Qualcomm**   **Jan 2015 - Aug 2019**

➔ Team Bio: Policy Manager is a component of Qualcomm's modem software that dynamically configures the modem based on a variety of signals/indicators.
➔ Implemented solutions for Operators/OEMs requirements based on customer and telecom standards on the Policy Manager team. (C/C++, Python)
➔ Led design discussions to deliver robust, scalable solutions and mentored junior engineers in all aspects of the project lifecycle.

Software Engineer, Intern   **Qualcomm**   **May 2014 – August 2014**

➔ Developed an extension of the Off-Target Test Environment for interactive scenario validation and test simulation, e.g., changing the device's location, moving from online to airplane mode. Created a Windows Forms application for clients to interactively validate their device and create new test scenarios. (C/C++, P4)

EDUCATION

New York, NY   **New York University**   **Aug 2019 – May 2021**
Master of Science (MS), Computer Science at Courant Institute of Mathematical Sciences
Courses: Machine Learning, Computational Cognitive Modeling, Big Data Application Development Distributed Systems, Deep Reinforcement Learning, Realtime and Big Data Analytics
Expected Graduation Date: May 19, 2021, *GPA:* 3.8

Blacksburg, VA   **Virginia Tech**   **Aug 2012 – Dec 2014**
Bachelor of Science (BS), Computer Engineering, Minors in Computer Science & Mathematics
Magna Cum Laude, *GPA:* 3.61; Dean's List 2012-2014

Projects

➔ *Trump Twitter Deviation (Summer 2020):* Comparison between President Trump's tweets and Twitter Trending data to determine if he deviates from current major events such as the COVID-19 pandemic, BLM protests, etc. (Hadoop, Hive, Impala, Java)
➔ *Predicting Average Adjusted Gross Income (Summer 2020):* Predicting Average Adjusted Gross Income (AGI) for each county in the U.S. based on U.S. Census data: Business Patterns, Demographics, and Educational Attainment. 91% of predications fall within 30% of the target variable with RMSE = 5.5 and R2 = 0.63. (Scala, Spark, Tableau)
➔ *Incorporating Human Prior Knowledge into a Reinforcement Learning Agent for Atari Games (Spring 2020):* Equip an RL agent with the basic components of an Atari game environment using curriculum learning. Our best agent was able to learn to complete a new game *5x faster* than regular agents. (PyTorch, Python, PyGame, Tensorboard)
➔ *COVID-19 News Analyzer (Spring 2020):* Analyze news articles related to COVID-19 based on different metrics: Sentiment Analysis, Emotion Detection, News Articles Categorization, Fakeness. (Python, Scikit Learn, NLTK, Matplotlib, Pandas)
➔ *Full Stack Deep Learning Workshop (August 2018):* 3-day UC Berkeley workshop on designing and scaling deep learning models presented by Professor Pieter Abbeel. (TensorFlow)

Languages and Technologies

Proficient: Python, C, Git, Perforce, JIRA, Jupyter

Familiar: Scala, Spark, Hive, Impala, SQL, PyTorch, TensorFlow, scikit learn, Keras, C++, Java, Numpy, GCE, AWS, Scipy, Matplotlib, Hadoop, MapReduce