GitHub
LinkedIn

Carl Barbee

(757) 839-8836
carlb1577@gmail.com

Summary

NYU Computer Science Master's student building expertise in ML/DL with Python and Pytorch through personal projects and competitions. 4.5 years of development experience with C/Python working on wireless and embedded systems.

Employment

Senior Software Engineer **Qualcomm** **January 2015 - August 2019**

- Developed Operators/OEMs requirements based on customer and telecom standards for Policy Manager. (C/C++, Python)
- Policy Manager is a component of Qualcomm's modem software that dynamically configures the modem based on a variety of signals/indicators.
- Led design discussions to deliver robust and 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 devices 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)

LabVIEW Student Ambassador **National Instruments** **Fall 2013– Spring 2014**

- Organized a LabVIEW workshop for students/professors to become proficient LabVIEW developers.
- Administered Certified LabVIEW Associate Developer Exam and exceeded the company's passing rate goal by 9% and previous workshop average by 19%. (LabVIEW)

Engineering Leadership Intern **National Instruments** **May 2013 – August 2013**

- Created a high throughput compression algorithm to highlight the processing ability of the FlexRIO product line at technical conferences. (LabVIEW)

Education

New York, NY **New York University** **Fall 2019 – Present**

- Master of Science (MS), Computer Science at Courant Institute of Mathematical Sciences - New York University
- Expected Graduation Date: Spring 2021

Blacksburg, VA **Virginia Tech** **Fall 2012 – December 2014**

- Bachelor of Science (BS), Computer Engineering, Minors in Computer Science & Mathematics
- Magna Cum Laude, GPA: 3.61; Dean's List 2012-2014

Technical Experience

Projects

- **Paper Reading Group (Summer 2019):** Created a reading group with a NYU PhD student to discuss GANs and RL topics.
- **OpenAI Retro Contest (April—June 2018):** Competed in transfer-learning contest to design an agent to play custom levels of Sonic games. (TensorFlow)
- **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)
- **Emojify (2018).** Developed a sequence model to insert emoji(s) at the end of an input sentence. Utilized pre-trained word embeddings fed into an LSTM to predict the appropriate emoji(s). (Keras, numpy)
- **Jazz Improvisation (2018).** Given pre-processed music rendered into musical values an RNN is trained to generate musical values that are post-processed into midi music. (Keras, numpy)
- **Neural Style Transfer (2018).** Implemented neural style transfer to generate novel artistic images. (TensorFlow, Keras, Scipy)
- **Car Detection (2018).** Applied YOLO to car detection to create bounding boxes around objects. (TensorFlow, Keras)
- **Deep Learning Specialization (Fall 2017—March 2018):** Implemented and studied CNNs, RNNs, LSTM, Adam, Dropout, BatchNorm, Xavier/He initialization, and more. Some projects listed above.

Languages and Technologies

Proficient: Python; C; Git; Perforce; JIRA; Jupyter
Familiar: Pytorch; TensorFlow; Keras; C++; Java; Numpy; GCE; AWS; Scipy; Matplotlib