Anthony Meyer

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Skills

Working Knowledge:	Xilinx SoCs, Petalinux, AWS (EC2 and Elastic Beanstalk), Django, Neural Networks with PyTorch, SciPy, OpenAI Gym, Latex, iOS App Dev, Basic Game Engine Dev, Reinforcement Learning, Classification Methods, Randomized Optimization Methods, Supervised and Unsupervised Learning, TFS, SAFe / Agile Scrum, git, C++, C, C#, Python

Education

Georgia Institute of Technology — Graduated: May 2021
Master of Science in Computer Science — Gpa: 4.0/4.0
Machine Learning Specialization

University of Tennessee Knoxville — Graduated: Dec 2015
Bachelor of Science in Electrical Engineering — Gpa: 3.93/4.0

Work Experience

Current – Jan 2016 | **Siemens Healthineers** - Knoxville, TN
Senior Embedded Software Engineer

- Architected and implemented embedded software for PET detector electronic assemblies. This embedded software:
  - performs setup algorithms that calibrate the detectors to account for timing and signal variation due to material and manufacturing imperfections.
  - monitors the environment, applying real-time gain adjustments to account for the temperature variation in detector material.
  - maintains a PID cooling loop to keep detector and FPGA temperatures at a specified set-point.
  - calibrates high-speed FPGA communications lanes to maintain stability.
  - monitors and reports system faults and failure modes.
- Migrated embedded software platform from bare metal OS running on soft-core processor to Linux running on ARM processors.
- Developed GUI tools to parse PET acquisition data, calibrate the detector electronic assemblies, and visualize the results.
- Developed functional test set software for 8 high-level assemblies.
- Acted as SAFe Scrum Master for the Event Detection and Discrimination Team.
- Acted as Intern Co-Recruiter and Coordinator, leading projects with and mentoring over 15 interns.
- Released engineering change orders for cables and wiring diagrams.
- Wrote and released software design specifications, unit test specifications, and command interface specifications.

Jan 2016 – Jan 2015 | **Make Me Modern (startup venture)** - Knoxville, TN
Full-Stack Developer

- Developed an automated system that extracts pictures, theme colors, text information, and business information from old websites, and uses that data to generate new websites, using modern looking templates.
- Worked with Python, Javascript, Django, AWS EC2, and postgreSQL technology stack.
- Wrote web scraping and data extraction modules to fetch business data.
- Integrated Facebook, Yelp, and LinkedIn APIs to retrieve business information.
- Won $10,000 in funding through the University of Tennessee's Boyd Venture Challenge.
- Won $5,000 in funding through the high growth division of the University of Tennessee Business Plan Competition.

Aug 2013 – Jan 2013 | **Siemens Molecular Imaging** - Knoxville, TN
ER&D Intern

- Handled complaint investigations involving detector electronic assemblies, acquisition computers, and other high-level assemblies.
- Wrote GUI tools to automate firmware downloads, run PET acquisitions, and analyze the results.
- Developed and implemented accelerometer circuit to measure G-force while dropping computers (customer complaint investigation).

Jul 2012 – Jun 2012 | **MOX Project** - Aiken, SC
Electrical Engineering Intern

- Drew wiring diagrams and calculated power budgets for the MOX nuclear disarmament facility.

School and Personal Projects

Current | **Optimal Glucose Project**
Personal Project
Extends Dexcom readings into the future using predictions calculated with meal and insulin events. Optimal parameters are calculated using simulated annealing with meal and insulin models, dexcom data, and meal and insulin events.

Apr 2020 | **Markov Decision Processes** - Georgia Tech
Machine Learning Project
Implementation and analysis of three reinforcement learning algorithms (policy iteration, value iteration, and Q-learning) on two MDPs (OpenAI Frozen Lake and Tic-Tac-Toe). The Frozen Lake environment involves navigating an agent through an icy grid where actions have stochastic outcomes.

Mar 2020 | **Unsupervised Learning and Dimensionality Reduction** - Georgia Tech
Machine Learning Project
Implementation and analysis of two clustering and four dimensionality reduction algorithms on two datasets. This paper covers K-Means clustering, expectation maximization, principle components analysis, independent component analysis, random components analysis, and linear discriminant analysis. The first dataset includes pulsar feature and classification data. The second dataset includes student feature and performance data.

Dec 2018 | **Raven's Progressive Matrices Test Solver** - Georgia Tech
Knowledge Based AI Project
Implemented an agent that performs moderately well on a Raven's Progressive Matrices test, which is a visual test that is used to measure general human intelligence and abstract reasoning.

Jul 2018 | **DQN on OpenAI Lunar Lander** - Georgia Tech
Reinforcement Learning Project
Implemented Deep Q-Learning algorithm that trained a lunar lander how to safely land on a platform in the OpenAI LunarLander-v2 environment.

Scholarships and Honors

Min Kao Scholarship
Hope Scholarship
Summa Cum Laude
Charles and Marth Sprankle Scholarship
Tau Beta Pi Engineering Honors Society

Some Hobbeys and Interests

Music Recording, Rock Climbing, Competitive Programming, Hot Sauces, Pens, Dog Parks, Baseball, Rubik's Cubes, Italian, Chess