Michael Anderson
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EDUCATION

Stony Brook University, Stony Brook, NY 2017 - 2018
M.S. in Computer Science

Bates College, Lewiston, ME 2008 - 2012
B.A. in Philosophy, B.A. in Japanese

PROJECTS

Forensic Browsing Capture and Replay Tool Fall 2018

- Implemented a forensic tool for capturing and replaying web browsing sessions. This browser extension records HTTP and WebSocket traffic, and can later feed the traffic back to the browser to recreate the content seen. Written in HTML, CSS, and Javascript.

Remote Image Recognition Android Client 2018

- Developed an Android app and accompanying front end server that leverage remote, large-scale image recognition networks to classify camera data in real-time. Allows users to interactively view the network's predictions and provide training feedback. Uses multithreaded environment to handle simultaneous user inputs and network communication efficiently. Client app is written in Java, server in Python and Go.

R-CNN Motion Classifier Spring 2017

- Trained a neural network to classify 10 different human actions across a series of still frame images. Achieved a roughly 55% accuracy after training the Recurrent Convolutional Neural Network (R-CNN) on the UCF101 dataset. Written in Python using Pytorch.

GAN Image Generator Spring 2017

- Trained a neural network to recognize and generate images of numbers. After running the Generative Adversarial Network (GAN) for 1000 epochs on images from the MNIST data set, generated images were recognizable, after 3000 (about 1 hour of training on a CPU) generated images were clear. Written in Python using Pytorch.

ID3 Clickthrough Predictor Fall 2017

- Given users' website click behavior, approximated the likelihood of users visiting one site after visiting another. Predictions were made using a decision tree that was constructed with an ID3 algorithm. After training on 40,000 browsing sessions, the decision tree predicted clickthrough behavior with a 75% accuracy rate. Written in Python.

Bayesian Spam Classifier Fall 2017

- Detected spam mail using a naïve Bayesian classifier. When trained on a data set of 9,000 emails, achieved over a 98% accuracy rate in testing. The classifier, email parser and data classes were written in Python.

Threadsafe Server and Queue Fall 2016

- Wrote a multithreaded load balancing server to handle large numbers of clients simultaneously. The server handles requests by passing them to worker threads. Requests and available worker threads are tracked using custom, thread-safe queue and hashmap data structures. Written in C for Linux.

Custom Bash Shell Fall 2016

- Implemented a text-based terminal with custom commands. The terminal shell can execute commands asynchronously as threads, and can interrupts, kill, and track the status of child threads. Supports output redirection and piping. Written in C for Linux.

WORK EXPERIENCE

Stony Brook University, Stony Brook, N.Y. Summer 2018
Research Assistant

- Wrote a client app that uses remote image recognition networks to enable quick, high accuracy image recognition on a low-powered device

- Designed app to be reliable, extensible, and implemented on a large scale
- Tested compression protocols and various threaded designs to achieve minimum-latency transmission of large, intermittent chunks of data
- Created a front-end server to efficiently process client requests, dispatch the requests to a neural network, and return replies

Wilmer Cutler Pickering Hale and Dorr LLP, Washington, D.C. July 2014 – July 2016
Senior Project Assistant – Domestic and International Litigation
- Maintained case material databases, prepared factual summaries and statistical reports
- Audited financial records for consistency and potential fraud
- Cite checked legal briefs; researched legal precedent and factual claims

Japanese Exchange and Teaching Program, Kurobe, Toyama, Japan August 2012 – March 2014
Assistant Language Teacher
- Taught English grammar and conversation classes to 1st-9th grade classes at 5 schools
- Designed lessons and local syllabus for regional use
- Filmed promotional material for Kurobe Board of Education

Bates College, Information and Technology Help Desk, Lewiston, ME August 2011 – May 2012
Student Technology Assistant
- Provided customer care and technical assistance to faculty, staff and students
- Researched, resolved, and responded to client service requests in a timely manner

Bryant University Chafee Center for International Business, Smithfield, RI Summer 2011
Research Assistant
- Developed strategies for the allocation of state ARRA funds earmarked for energy efficiency programs
- Promoted relations between companies in and out of the Rhode Island, connecting startups with angel investors

TECHNICAL SKILLS

- **Programming/Scripting Languages**: (proficient) C, C++, C#, Python, Java; (familiar) Visual Basic, MATLAB
- **Query/WebDev:** SQL, HTML, CSS, Javascript, WebExtensions
- **Operating Systems:** Ubuntu, Solaris, Windows, Android
- **Frameworks/Tools:** MySQL, SQLLite, DBeaver, VMWare, Docker, PyTorch, scikit-learn, OpenCV, Git, Office Suite
- **Languages:** English (primary), Japanese (conversational)
- **Legal Tools:** Concordance, Relativity, Kroll, LexisNexis, Westlaw, PACER
- **Writing:** APA, MLA, *The Bluebook*

INTERESTS AND HOBBIES

- wrestling, judo, jiu-jitsu
- biking, hiking, camping
- game design