Guthrie Alexander

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Technical Skills

- **Proficient in**: Python (pandas, numpy, scikit-learn, pytorch, matplotlib, flask, mongoengine, fabric, Gunicorn), SQL (MySQL, MS SQL Server, OracleDB), MongoDB, Bash, Git, Linux (Ubuntu, CentOS), Javascript (VueJS), Django, Django REST Framework, Processing, Arduino IDE, Maya, Scrum/Agile, Jenkins, Docker, NGINX, jupyterLab
- **Experience with**: AWS, VisualBasic, Perl, PHP, AutoIT, Java, C/C++, Coq, R, TCL, CUDA

Professional Experience

Software Engineer, Harmonia Holdings, LLC   *January 2018 – Present*

- Constructed a Django web framework, including 10+ unique viewsets, accessible via a RESTful API
- Led team effort on Continuous Integration, including configuring Jenkins, custom Docker images and containers which ran NGINX and Gunicorn as web services
- Planned and developed 10+ VueJS modules for company's web application front-end
- Designed unit tests for python using pytest, achieving 90%+ test coverage on code committed via Git
- Researched and developed a python module for Siemens Jack 9.0 for automating an HSI task model

Graduate Research Assistant, UVa ECE   *July 2016 - August 2017*

- Administered four departmental Linux research machines all connected to an OpenFlow switch
- Presented research progress and findings at GENI NICE 2016 in Irvine, CA in December, 2016

IT Specialist, University of Virginia Advancement Office   *October 2013 - July 2016*

- Administered Windows Server 2003/2008 R2 machines, which includes AD, File Sharing, Group Policy

IT Technician and Apple Support, Saint Anne's-Belfield School   *August 2012 - October 2013*

- Adjusted and maintained Group Policy Object scripts and policies for domain computers

Technical Support Associate, Bedford/St. Martin's   *June 2009 - August 2012*

- Implemented Java web apps monitoring temperature and disk usage of 12+ servers (Java front-end, MySQL back-end)

Education – University of Virginia

Master of Computer Science, **GPA: 4.0**   *August 2015 – December 2017*
Bachelor of Arts, English Literature, Computer Science minor, **GPA: 3.4**   *August 2005 - May 2009*

Relevant Coursework

Machine Learning   *Fall 2016*

- Created supervised machine learning models (linear regression, SVM) using the python library scikit-learn
- Implemented NLP (Natural Language Processing) models using Bayesian probabilistic models in python
- Developed image classification and audio clustering models using KNN, SVM and PCA

Cloud Computing   *Spring 2017*

- Set up Linux VMs in public cloud infrastructures (IBM BlueMix, Microsoft Azure, Amazon AWS)
- Engineered a 4-node Hadoop cluster in AWS on EC2, ran Terasort benchmark using 1GB of Teragen data

Computational Visual Recognition   *Fall 2017*

- Built basic neural network with a linear softmax loss function, trained using Stochastic Gradient Descent using the CIFAR-10 image set, trained
- Trained and tested Convolutional Neural Networks for image classification, achieving accuracy as high as 71% on the CIFAR-10 validation set, as well as for detection and segmentation tasks