

EMPLOYMENT

Principal Cloud Engineer Millenium Oct 2018 – Present

- Developed an AWS Batch based compute grid that was used as the primary research environment by several trading teams.
- Lead and implemented two PB-scale data migrations to AWS leveraging AWS Datasync and the build out of a new datacenter pod to facilitate transfer.
- Architected the data access pattern leveraging AWS IAM, AWS Glue and AWS Lake Formation.
- Architected and implemented 10+ microservice applications using AWS API Gateway and Kubernetes.
- Built application developer friendly CI/CD pipelines to simplify and automate deployments and infrastructure changes on AWS.
- Enabled a variety of data engineering workloads on AWS including Spark workloads on EMR and kDB workloads on AWS Batch and Kubernetes.
- Worked with quantitative developers to build a distributed, autoscaling backtester solution on AWS using Dask that interfaced with the compute grid.
- Deployed a AWS Lambda based web scraping solution that was widely used by data engineers.
- Worked closely with quantitative developers to build cloud based low latency simulation and back-testing tools.
- Worked with StatArb & Equities technology to facilitate a wide-scale migration of services to AWS and grew the department into the largest AWS user.
- Received a promotion from Cloud Solutions Architect to Principal Cloud Engineer, managed two direct reports and had ownership of all StatArb and Equities cloud projects.

DevOps Security Engineer Cloud9 Technologies LLC Nov 2017 – Oct 2018

- Developed rules using AWS Config and AWS Lambda to monitor & enforce security policies.
- Worked with auditors to ensure that our infrastructure met SOC2, ISO and TPO requirements.
- Managed and configured SAST/DAST and IDS/IPS solutions as well as security patching across over 300 hosts and 4 OS versions, including Windows and Linux.
- Proactively identified security issues in our systems and worked with engineering teams to design and implement solutions.
- Managed SSL certificates for internal and external webservices.
- Deployed a Key Management Service using AWS KMS to enable Application Layer Encryption (ALE) of sensitive customer data.
- Developed infrastructure as code and configuration management using Terraform and Puppet.
- Assisted in the architecture and design of business critical and complex components of the product including a distributed messaging system and a streaming data pipeline.
- Mediated and resolved production issues as part of a 24/7 on-call rotation with responsibilities spanning from a C# desktop client, to audio and WebRTC, to backend PHP and Java processes.
- Developed Python scripts to automate infrastructure maintenance and monitoring tasks such as managing database backups, alarming on AWS SES e-mail bounce rates, and uptime of SAML authentication services.
- Deployed an ASR Machine Learning model, scaled the model for production workloads, and developed a webservice that transformed the input data and interfaced with the model.
- Developed and deployed containerized services on AWS ECS.

Security Consultant Accenture Jun 2013 – Nov 2017

- Architected and deployed global, customer-facing IAM solutions with up to 20M users.
- Worked in an agile environment and designed the CI & CD workflows using Jenkins.
- Developed infrastructure automation using AWS CloudFormation and configuration management

Worked extensively with federation protocols such as SAML, OAuth and OpenID Connect.
Developed and implemented external fine grained authorization systems using attribute based access control (ABAC).
Designed and implemented user profile storage systems that were compliant with Data Privacy & Sovereignty laws.
Became the first OpenAM Certified Specialist and was a SME & architect for ForgeRock integrations.
Designed IAM federation solutions and integrations for challenging scenarios including applications that spanned geographical borders and firewalls, and applications that had unique integration requirements.
Worked with CloudFormation, Ansible, AWS, Ruby, Java, Spring, SQL, ForgeRock, Oracle IAM, and Salesforce Identity.
Worked on numerous internal development projects in addition to project work, including a Spring Security XACML PEP, infrastructure and configuration build automation, and sales demos.
Promoted to Security Sr. Analyst in May 2014 and to Security Consultant in December 2016.
Managed teams of up to 6 onshore and offshore developers.

- Created automated test scripts for an insurance quoting application using Selenium, XSLT and JUnit.
- Managed and trained two offshore QA Automation engineers to maintain and develop automation testing.

- Collected and analyzed endowment performance and evaluated prospective investments.
- Automated performance metrics generation and reduced monthly analysis time by 30%.

- Created a C# application that allows users to design multi-factor displays and auto-generates flight critical C++ code that reflects the design and runs on an embedded system.
- Embedded Microsoft Visual Sourcesafe functionality into a proprietary helicopter design application.
- Applied the CMMI management model and helped prepare for two Class C appraisals.

Storrs, CT	University of Connecticut	Fall 2009 – May 2013
<ul style="list-style-type: none"> • B.S.E. in Computer Science & Engineering with Honors, May 2013. GPA: 3.6 • B.S. in Finance with Honors, May 2013. GPA: 3.6 		

- **Recurse Center (2017):** Participated in a six week program where I completed a machine learning competition, developed a distributed hash table in Go, and explored OS concepts.
- **Back on My Feet Co-Lead (2014 – 2017):** Lead a volunteer partnership between Accenture and Back on My Feet NYC, engaging hundreds of volunteers for 30+ events over 3 years.
- **Additional Course Work (2016 – 2017):** Completed the Bitcoin & Cryptocurrency Technologies and Machine Learning courses on Coursera.
- **Undergraduate Honors Thesis (2013):** Applied statistics and financial math to evaluate equities in the S&P 500 for pairs trading and validated strong candidate pairs on live trading data.
- **Undergraduate Researcher (2010 – 2012):** Developed and implemented algorithms in bioinformatics, specifically to identify transcription factor binding sites and align genes across species.

- Java (Proficient); Python (Proficient); SQL (Proficient); C++ (Prior Experience); C# (Prior Experience); Go (Prior Experience); Ruby (Prior Experience);
- AWS; Kubernetes; Linux; Security;