

## EMPLOYMENT

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<b>Principal Cloud Engineer</b>	<b>Millennium Management LLC</b>	<b>Oct 2018 – Present</b>
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- 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+ microservices 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 backtesting 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.

<b>DevOps Security Engineer</b>	<b>Cloud9 Technologies LLC</b>	<b>Nov 2017 – Oct 2018</b>
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- 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.
- Implemented Linux Security controls including CIS benchmarks and became the owner of the Linux environment across the company
- 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 on Amazon ECS, scaled the model for production workloads, and developed a webservice that transformed the input data and interfaced with the model.

<b>Security Consultant</b>	<b>Accenture</b>	<b>Jun 2013 – Nov 2017</b>
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- 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 using Ansible.
- 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 for challenging scenarios including applications that spanned geographical borders and firewalls, and 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.

## Investment Analyst Intern

- 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.

- 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