

## EXPERIENCE

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### • **Bridgewater Associates**

*Security Engineer*

Westport, CT

*June 2018 - Present*

- Improved monitoring of critical infrastructure with tooling for on-premise packet capture infrastructure
- Instilled a 'DevOps' mindset amongst sys-admins through lunch and learns and demos
- **Iris:** I designed and developed a suite of investigation tools to reduce the impact of insider threat attack vectors
  - \* Wrapped graph analysis tools in a user-friendly domain-specific user interface
  - \* Designed data infrastructure for a graph with more than ten thousand (10,000) nodes and a density of 2 or more
  - \* Deployed with a custom secure CI/CD pipeline with static code analysis using SonarCloud
  - \* Enabled authorization with Azure Active Directory SSO
- **Policy DB:** is a proxy configuration engine for tracking the lifecycle of policy exceptions I designed and built.
  - \* Improved the accuracy of year-end audits with a temporal data architecture
  - \* Integrated the policy configuration engine with RSA Archer to deliver real-time risk monitoring
  - \* Designed highly fault-tolerant multi availability zone AWS architecture with RDS and Fargate

### • **Consulting**

*Application Engineering*

Tampa, FL

*October 2017 - June 2018*

- Refactored a large-scale React application and improved state management with Redux
- Deployed crash reporting (Sentry.io) to reduce defect remediation time
- Slash regression rates across multiple applications by leading adoption of TDD
- Developed a highly scalable, SVG rendering system in Ember
- Migrated monolithic on-premise infrastructure to AWS based micro-services seeing downtime cut in half
- Prepared company-wide analytics system for GDPR

### • **SentinelSix**

*Full Stack Engineer*

Columbia, SC

*June 2017 - October 2017*

- Built a real-time tracking dashboard with a throughput of 10,000 geospatial points per second (React and Postgres)
- Developed a performant cloud-first geospatial data ingestion endpoint (Go and Postgres)

### • **TCube Solutions**

*Software Application Developer*

Columbia, SC

*April 2016 - June 2017*

## PROJECTS

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- **Futurecast:** I built a long-term financial planning toolkit to codify my financial decision making logic. Futurecast was designed to make my decisions more efficient and accurate.
  - Built Futurecast as a performant React frontend with a GraphQL/Postgres data layer
  - Designed a free CI/CD pipeline with GitLab and Netlify
- **SkyFlix:** I built software for an in-flight entertainment system used on business jets.
  - Built SkyFlix as a React Native mobile app with a REST backend
  - Designed and optimized the app to run offline for years
- **Switch CMS:** Cabin management systems for planes are expensive, Switch CMS is an alternative solution with modern technology.
  - Integrated a React Native mobile app with Global Cache devices to control serial and IR devices.
  - Discovered current commands and devices through reverse-engineering the CAN bus infrastructure.

## PROGRAMMING SKILLS

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- **Languages:** JavaScript, Python, Rust, Go, Swift, SQL, Terraform      **Cloud Providers:** AWS, Azure, Heroku, Firebase
- **Databases:** MongoDB, Amazon Aurora, Postgres, Neo4j      **Technologies:** GraphQL, REST
- **Frameworks:** React, Expo, Express.js, Flask, Electron, ARKit
- **Paradigms:** TDD, Functional, OOP, Microservices, Infrastructure as Code, Cloud Native
- **Software:** Jira, Splunk, Qualys, RSA Archer, Active Directory, Gerrit, GitLab, Rundeck, PagerDuty