Jacob Sansbury

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EXPERIENCE

- **Bridgewater Associates**   Westport, CT
  Security Engineer   *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
    - Designed and built cloud-agnostic Terraform modules to future-proof Bridgewater's infrastructure deployments
    - **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
        * Built a custom Azure CI/CD pipeline to deploy Iris 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 policy audits with a temporal data architecture
        * Integrated the policy configuration engine with RSA Archer to deliver real-time risk monitoring
        * Implemented Terraform-backed multi-availability-zone AWS infrastructure with RDS and Fargate

- **Consulting**   Tampa, FL
  Application Engineering   *October 2017 - June 2018*
    - Refactored a large-scale React application and improved state management with Redux
    - Deployed client based crash reporting (Sentry.io) to reduce defect remediation time
    - Lead adoption of TDD across two teams of ten engineers
    - Migrated monolithic on-premise infrastructure to AWS based micro-services seeing downtime cut in half
    - Prepared company-wide mixpanel analytics system for GDPR by deploying global ETL service

- **SentinelSix**   Columbia, SC
  Full Stack Engineer   *June 2017 - October 2017*
    - Built a real-time asset tracking dashboard with a throughput of 10,000 geospatial points per second (React and Postgres)

- **TCube Solutions**   Columbia, SC
  Software Application Developer   *April 2016 - June 2017*

PROJECTS

- **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 (Go)
    - 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 over TCP sockets
    - Discovered system commands through reverse-engineering aircraft CAN bus infrastructure
    - Built a TCP socket relay with Rust and deployed multiple aircraft with RaspberryPi Zeros

PROGRAMMING SKILLS

- **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