Jacob Sansbury

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EXPERIENCE

- **Bridgewater Associates** — Westport, CT
  Security Engineer — *June 2018 - Present*
  - **Iris**: I designed and developed a suite of tools to assist Bridgewater's staff security team with insider threat investigations
    - Wrapped graph analysis tools in a user friendly and 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
  - Queried page load time with Selenium jobs on devices in multiple office locations
  - Designed a secure code promotion pipeline with Gerrit and on-premise Bitbucket
  - Improved monitoring of critical infrastructure by developing tooling for on-premise packet capture infrastructure

- **Consulting** — Tampa, FL
  Application Engineering — *October 2017 - June 2018*
  - Prepared company-wide analytics system for GDPR
  - Reduced tech debt by refactoring a large-scale React application and improving state management with Redux
  - Integrated Sentry.io to increase defect awareness and reduce remediation time
  - Lead adoption of Test Driven Development (TDD) to slash regression rates across multiple applications
  - Developed a highly scalable, SVG rendering system in Ember
  - Migrated monolithic on-premise infrastructure to AWS based micro-services seeing downtime cut in half

- **SentinelSix** — Columbia, SC
  Full Stack Engineer — *June 2017 - October 2017*
  - **Guardian Angel**: is a global personnel security solution adopted by multiple Fortune 100 companies
    - Built a real-time geospatial tracking dashboard with React and Postgres
    - Built performant cloud-first geospatial data ingestion endpoint, using Go 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
  - 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

- **Languages**: JavaScript, Python, Rust, Go, Swift, SQL, Terraform **Cloud Providers**: AWS, Azure, Herkou, 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