

Jacob Sansbury

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EXPERIENCE

- **Saleae Inc.** San Francisco, CA
Full Stack Software Engineer *November 2019 - Present*
 - Reduced single frame render time by 50% for a 400 Ms/s mixed-signal oscilloscope rendering pipeline written in C++ and Typescript
 - Invented a Typescript library to upgrade and downgrade more than 100 typescript types across software versions
- **Bridgewater Associates** Westport, CT
Security Engineer *June 2018 - Present*
 - **Insider Threat Investigation Toolset:** Engineered investigation tools to mitigate insider threat attack vectors
 - * Engineered a set of 3 investigation tools to mitigate insider threat attack vectors each included tie-ins to AWS infrastructure and a React/Typescript frontend
 - * Engineered multithreaded front end data processing pipelines for rendering graph data on an HTML5 Canvas with more than ten thousand nodes and twenty thousand edges
 - * Decreased staff training time by three days through wrapping complicated but powerful graph analysis tools into a user-friendly React user interface
 - **Proxy Policy Configuration Engine:** Built tracking and auditing software for proxy policy exceptions
 - * Mitigated risk for over 1,000 policy exception by integrating Bridgewater's proxy configuration engine with RSA Archer
 - * Built a proxy configuration engine that tracks over one thousand active policy exceptions in React and Golang
 - **Security Infrastructure:**
 - * Migrated a Docker build pipeline to Bazel for 80% smaller builds and reduced attack surface
 - * Improved critical infrastructure visibility by 90% through new tooling for packet capture
 - * Grew AWS Terraform adoption by 5x through education sessions and team demos
 - * Embedded static code analysis in over 100 CI/CD pipelines with SonarCloud
 - * Implemented Terraform-backed multi-availability-zone AWS infrastructure with RDS and Fargate to store and process terabytes of graph data
- **Mad Mobile** Tampa, FL
Front End Software Developer *October 2017 - June 2018*
 - Reduced defect remediation time across more than 10,000 clients by implementing Sentry.io in React and C++ codebases
 - Decreased downtime by 50% by migrating monolithic Node.js on-premise infrastructure to AWS lambda micro-services
 - Engineered a GDPR compliant analytics system with an average throughput of 100,000 events per second on AWS Fargate
 - Lead adoption of TDD across a team of ten engineers
- **SentinelSix** Columbia, SC
Full Stack Engineer *June 2017 - October 2017*
- **TCube Solutions** Columbia, SC
Software Application Developer *April 2016 - June 2017*

PROJECTS

- **Typescript Migration:** Invented a library to manage versions of TypeScript types
- **Switch CMS:** Cabin management systems for planes are expensive and a decade behind current technology. Switch is an alternative solution with modern technology
 - Integrated a React Native mobile app with Global Cache devices to control up to twenty devices over serial and IR
 - Created a plug and play device controller capable of reverse engineering aircraft CAN bus infrastructure to discover and expose device control through a subnet facing service in C++ and Go
- **SkyFlix:** Developed in-flight entertainment software for business jets including some of Boeing's top government customers with React Native and C++

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