Daniel Card

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Experience

Palantir Technologies Inc. // PUBLIC TRUST   **January 2025 – Present**
Full Stack Software Engineer II   *Washington, D.C.*

○ Re-platformed a legacy system of ≈**500k** SLOC from a Palantir Gotham implementation to a modernized Foundry platform with ontologized data models in under a year to showcase adaptability

○ Lead the complete re-write of a `coffeescript` and `Marionette` backbone frontend application to a modernized `React` + `vite` to support web, mobile with PWA responsive

○ Uncovered a critical vulnerability on a client interface that exposed thousands of user PII and alerted stakeholders to the potential threat before collaborating with relevant teams to mitigate

○ Successfully ingested production data to deliver a ≈**$2M** analytics dashboard with tight deadlines, empowering upper-level management with real-time insights to tackle client-side bottlenecks

○ Modernized and adapted a highly available legacy record of systems software for a contract modification, involving ≈**150k** SLOC with custom business logic integration while ensuring `ACID` compliance

○ Responded to bi-monthly firefighting duties, requiring on-call availability and prompt responses within three minutes or less to minimize downtime and maximize effectiveness

○ Distributed a `PySpark` build, achieving a significant **70%** reduction in I/O bottlenecks and enabling the successful execution of multiple daily builds

○ Leveraged `GPT-4o` `LLM` capabilities to develop a customized spam detection model for a client, resulting in a **80%** accuracy in detecting spam and a reduction of **60%** spam in platform

○ Designed and prototyped a system of record to streamline workflows with real-time data ingests, resulting in the securing of a ≈**$2M** million contract as a direct outcome of process improvements leading to ≈**$75M** of follow on CLIN efforts

○ Aggregated data from multiple agency sources and built an MVP with geohashed locations to aid federal law enforcement to search for missing and exploited children

○ Developed a rapid prototype for a contract proposal leading to a ≈**$25M** contract award for a new CLIN

○ Delivered a customer MVP in a 3 week surge effort effectively joining external data sources to allow data analysis to eliminate data silo's with highlighted takeaways on FOC implementation

○ Extended a ≈**30k** SLOC `JUnit` testing suite to a new CLIN for regression testing and improved test coverage while lowering CircleCI runtimes by **20%**

○ Developed and maintained daily deployments of a developmental EKS cluster and ensuring daily deployments and functionality for client-site demonstrations

Booz Allen Hamilton // UNCLASS   **February 2024 – January 2025**
Staff Full-Stack Engineer   *Washington, D.C.*

○ Successfully prototyped an AI-powered CVE risk assessment tool within an air-gapped environment for the Army, leveraging AI to analyze and provide actionable insights on potential security threats

○ Integrated `Mistral LLMs` with LangChain via `FastAPI RAG` implementation to ingest pdf files and extract text to provide actionable insights on potential security vulnerabilities

○ Leveraged `zustand` for `React Redux` state management with for improved UI/UX performance for persisted components on page re-directs and page loads

○ Developed a Dynamic UI with react as a visual pipeline builder using `ReactFlow` library with full control of graph layout and nodal styling and pipeline configuration

○ Implemented caching for frequently used dependencies in the `GitHub Actions` workflow, resulting in an approximate **80%** improvement in job run time

○ Updated ent go fields, relationships, and custom resolvers to existing schemas within the ent framework, to achieve consistency and flexibility within GraphQL

The Boeing Company – *Phantom Works* // SECRET   **January 2023 – February 2024**
Software Engineer II   *Berkeley, MO*

- Led efforts to enable multi-target compilation by highlighting short comings in build systems, `vcpkg`, and GitLab CI/CD pipelines to enhance project hardware compatibility and streamline development
- Facilitated `Docker`/`Podman multi-platform` build images, enhancing cross-platform compatibility, and implemented multi-staging build techniques, reducing container file-sizes by **60%**
- Rapidly prototyped a mixed cpu processor architecture `k3s` cluster using a `QEMU` ARM emulator and automated hardware provisioning with `Ansible` for an air-gapped on-premises server
- Leveraged `RoCE` technology paired with `Rook` and `Ceph` to scale data storage infrastructure to support 100Gbps, realizing an exceptional **400%** reduction in latency and a 10x increase in storage IOPS
- Developed a `Grafana` monitoring dashboard with `Prometheus` to effectively visualize and analyze system metrics, in order to package performance metrics into releases for developmental records
- Optimized `RHEL 7.7/7.9` compatibility C++/Clang testing by parallelizing `Docker` image builds, resulting in a noteworthy **90%** reduction in testing time

Northrop Grumman Corporation // UNCLASS   **June 2021 – January 2023**
Software Engineer II   *Roy, UT*

- Successfully transitioned a `cesium` map viewer to `leaflet` map viewer through the refactoring of `cesium` map entities using `TypeScript`, resulting in a **50%** improvement in web page loading speed
- Integrated physical alarm for immediate active user alerts, with a fail-safe: prolonged inactivity prompts notifications to secondary/tertiary users, preventing system lockout
- Enabling streamlined missile silo oversight, implemented an Area of Responsibility (AOR) feature to dynamically highlight and display active silos within designated wings based on user role configuration
- Developed a `React` web application for the Physical Security of the U.S. Air Force's modernized ICBM – Sentinel program – to monitor missile sites to mitigate both domestic and foreign threats
- Took initiative and lead troubleshooting for a workaround during an unexpected SDE migration reducing team downtime by approximately 2-4 weeks

Education

Georgia Institute of Technology – Atlanta, GA
M.S. in Computer Science – Computing Systems   **August 2022 – Present**
Accolades: Teaching Assistant TA for Machine Learning for Trading, Software Development Process

University of Michigan – Ann Arbor, MI
M.S.E. in Aerospace Engineering – Computation   **August 2020 – May 2021**
B.S.E. in Aerospace Engineering – *Summa Cum Laude*   **September 2018 – August 2020**
Accolades: Aero Lab I – Graduate Student Instructor (GSI), Dean's List, University Honors, 1st Generation Engineer, 1st Generation STEM

Skills

Programming Languages:	Java, Python, TypeScript, JavaScript, Arduino, C, C++, CSS, Golang, Graphql, HTML, Lua, Matlab, Mojo, R, Ruby, Rust
Frameworks/Libraries:	Bootstrap, Django, Elastic, entgo, Flux, JUnit, Mantine, MaterialUI, React, Tailwind CSS, Redux, Expo
Development Tools:	Gradlew, Maven, Ant, Ansible, CMake, Ceph, Confluence, Docker, Flask, Git, Jira, Kubernetes, LaTeX, Make, Markdown, Ninja, Rook, vcpkg, LangChain, Ollama, Proxmox VE
Database Management:	Cassandra, Elasticsearch, MariaDB, MongoDB, MySQL, Neo4j, NoSQL, PostgreSQL, Redis, SQL, SQLite
Platforms:	Palantir Foundry & Gotham, AWS, Azure, Google Cloud Platform

Technical Challenges

HSI TECS Modernization SESS
April 2024 – May 2024
Palantir Technologies, **eSimplicity**, **Leidos**
Washington, D.C.
Senior DevOps // Full-Stack Engineer

- ○ Competed in a $100M contract whose effort finished 2nd in the TECS Modernization SESS competition
- ○ Collaborated with a team of 10 to develop a comprehensive full-stack web application that demonstrated login authentication, user admin role panels, and settings
- ○ Implemented AWS Cognito for credentials and role management, and OAuth for secure login, allowing for secure authentication and authorization
- ○ Designed a highly available architecture stack with AWS codepipeline, AWS Fargate, load balanced frontend and backend, Pyspark, kafka, ActiveMQ, Elasticsearch and Tenable stack scans
- ○ Embedded an Elastic Kibana dashboard to visualize and analyze data, allowing easy integration with third-party tools and services
- ○ Configured Infrastructure as Code (IaC) with Terraform to support automated AWS deployments

Entrepreneurial Ventures

Abyssal Technologies
May 2024 - February 2025
Solo Developer
Washington, D.C.

- ○ Solo designing and developing a React TypeScript application as a frontend UI for managing cloud architecture environments and billing
- ○ Built a Flask Python backend to handle API requests, data processing, and storage management in a PostgreSQL database
- ○ Implemented features for environment creation, management, and deletion, resource allocation, scaling configuration, and integration with major cloud providers (AWS, Azure, Google Cloud, Oracle)
- ○ Managing the entire development lifecycle, including planning, coding, testing, and deployment

Personal Projects

Homelab Server – Github Repository
May 2023 – Present

- ○ Employed `Proxmox VE` automated with `Ansible` IaC to optimize and manage virtual machines efficiently, VM provisioning, `Kubernetes` clustering and deployments
- ○ Streamlined container deployment with `docker-compose` simplifying configuration of containers while tunneling these services with `Cloudflare Zero Trust` to expose to WAN without exposing local ports
- ○ Virtualized router and Firewall with `pfSense` through `IOMMU` PCI network interface card passthrough
- ○ Using `apache guacamole`, a clientless remote desktop gateway, enabled remote VNC control of headless Raspberry Pi kubernetes cluster and VM's for increased flexibility

High Frequency Trading Simulation - Github Repository
September 2022 – October 2022
Former School Project - Available at request

- ○ Developed a custom bootstrapped aggregating learner to fine-tune trading parameters to optimize a simple SMA/ Bollinger-Band trading strategy in order to maximum out-sample trading returns
- ○ Employed statistical analysis to exploit mean reversion patterns with machine learning, enhancing returns through strategic positioning during volatile market swings
- ○ Ranked within the top quintile of contributed trader agents in the ABIDES database after parameter optimization