Brice Duke

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Full project index: briceduke.dev

Education

Software Engineering (BS) **August 2022 - December 2025**
University of Texas at Dallas | Cyber Defense Certificate

Experience

Independent Software Consultant **May 2020 - Present**

- Designed, built, and operated software for startups and small businesses across media, entertainment, restaurant, civic organizations, and hospitality industries.
- Led end-to-end delivery, owning the full software lifecycle as well as ongoing support for clients after delivery.

Selected Projects

[redacted] **May 2025 - Present**

- Developing a [redacted] for small- to medium-sized manufacturers.
- Implemented Stripe onboarding, payouts, and webhook security; built auth/RBAC and core [redacted].
- Built realtime [redacted] messaging with persistence and notifications.
- CAD-aware [redacted] is currently in the design/analysis phase.

World Conflicts Analyzer **August 2024**

- Assembled a near-realtime conflict map with a natural language query interface by configuring Palantir AIP/Foundry flows and using data from ACLED's conflict database.
- Designed the data ingestion and cleaning pipeline and iterated prompt engineering to produce concise, context-aware LLM answers for the conflicts.
- Shared a public demo (view here) that received 43k views.

Outfits.bio **May 2023 - September 2024**

- Built and operated a ~20 KLoC TypeScript/Next.js + tRPC platform used by hundreds of users to share outfits and follow profiles.
- Productionized image handling, caching, and CI/CD; maintained uptime and performance with monitoring and alerting.

UT Dallas Capstone - Sponsored by Everfox **August 2025 - Present**

- Developing a VSCode extension updater for air-gapped environments with a team of five other students.
- Building two Linux utilities: an online packager that resolves and downloads specified extensions and produces a zip archive plus a signed manifest, and an offline unpacker that verifies, installs atomically to the user's extensions directory, and logs to syslog.

Thrust-Vector-Controlled Rocket - Design Study **June 2024 - Present**

- Completed gimbal CAD and motor selection, and ran OpenRocket simulations to determine airframe and nose geometry.
- Planned flight software and computer architecture and components (C firmware on a STM32 with a 9-axis IMU, barometer, pyro controls, and a flash chip for logs).

Skills

- Languages: TypeScript, Python, C, with some Go, Java, and MIPS assembly experience.
- Systems/infrastructure: Linux, Docker, Postgres, Redis, REST/gRPC, WebSockets/SSE, CI/CD (GitHub Actions), Kafka, Cloudflare R2
- Tools: React/Next.js, NestJS, tRPC, Vue, React Native, GraphQL
- US citizen, clearance-eligible; prefer on-site