

Riwaj Mainali

SIGINT Developer | Software Developer

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SIGINT and software developer building automated data pipelines, cloud applications and web interfaces with Python, TypeScript, React, Next.js and AWS.

EXPERIENCE

Signal Intelligence Developer and Analyst

US Navy | Feb 2025 - Present

- Designed and implemented an automated SIGINT data pipeline, reducing ingestion time by an estimated 20-30% and preparing data for faster analysis.
- Integrated the pipeline into a larger SIGINT project, automating data handoff to support downstream analysis.
- Coordinated with joint and interagency partners to integrate SIGINT tools and practices into mission planning.

Software Developer

Aggregate Capital & Development Co. | May 2023 - Aug 2024

- Built inventory, repair-status and file-management systems for casino gaming machines, including endpoint testing for functionality, security and performance.
- Implemented OTP authentication with AWS Cognito, file storage with S3 and relational database management with RDS; wrote Python tooling for Unity animation files in DynamoDB.
- Developed React and Next.js progressive web interfaces integrating Unity games through WebAssembly, including offline functionality, server-side rendering and multi-format file upload and viewing.

EDUCATION

University of Maryland Global Campus

Master's Degree, Cyber/Electronic Operations and Warfare

Apr 2026 - Expected Jul 2027 | In progress | GPA: 4.0

University of North Texas

Bachelor's Degree, Computer Science

2020 - May 2024

TECHNICAL SKILLS

Python | TypeScript | React | Next.js | AWS Cognito | Amazon S3 | Amazon RDS | DynamoDB | SQLite | SIGINT | Progressive Web Apps | WebAssembly

SELECTED PROJECTS

Private gym tracker

Built a Next.js and SQLite training log with device pairing, conflict-aware server drafts, exercise history charts and private media attachments.

Personal terminal website

Built an interactive shell with a simulated filesystem, keyboard commands, a neon sign and an animated SDR waterfall.