

ABHIYAN POUDEL

Hattiesburg, MS

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Education

University of Southern Mississippi

Bachelor of Science in Computer Science (GPA: 3.95)

Expected Graduation: Dec. 2027

Hattiesburg, MS

Experience

Institute for Advanced Analytics and Security (IAAS), University of Southern Mississippi May 2025 – Present
Hattiesburg, MS

Team Lead, EDT (Enterprise Data Toolkit)

Jun. 2026 – Present

- Architected an **agentic research platform** that turns a question about a federal data product into a cited impact report: a **Go orchestrator** that provisions an isolated cloud sandbox per job, an agent runtime that fans out across **multiple LLM providers**, and **MCP** tool servers for academic and catalog search, deployed on **GCP Cloud Run** with Terraform.
- Designed the **concurrency model** that lets research runs execute in parallel: per-job sandbox isolation, automatic quarantine of failing workers, and zero-interruption deploys while runs are in flight, scaling the platform from a single-user demo to **10 concurrent users**.
- Built the **evaluation system** that scores every generated report: a versioned scoring engine that penalizes unsupported claims, verifies citations against their sources, and benchmarks output quality against **Perplexity and Gemini (88–100%** citation-support rate).
- Hardened the path to production with **branch protection and change-scoped CI**, a cost and infrastructure-drift audit across GCP Cloud Run, MongoDB, and Terraform, and access cleanup of the live database.

Research Assistant / Software Developer, AquaView

May 2025 – Jun. 2026

- Engineered and deployed the production **AquaView MCP Server** (FastMCP/Python) on Google Cloud Run for a federally funded NOAA project, enabling AI agents to query **19M+ oceanographic datasets** via the Model Context Protocol.
- Developed the **World Ocean Database (WOD) Chatbot**: Python data pipelines ingesting **200 years** of ocean observations and an LLM-powered natural-language query interface over multi-dimensional scientific datasets.
- Maintained CI/CD via **Google Cloud Build** and GitHub Actions for **4 services** across staging and production on GCP.

Elora AI LLC (Part-time)

May 2026 – Aug. 2026

Katy, TX

Founding Engineer

May 2026 – Aug. 2026

- Built a **multi-tenant AI voice receptionist** for **15 small-business clients** (restaurants, HVAC): **Telnyx** media streams into **Gemini Live** with tool-calling for bookings, orders, and messages; owner web dashboard, **Expo** mobile app, SMS summaries, **Stripe** billing on **Postgres**.

Chautari [501(c)(3) Non-Profit]

Dec. 2025 – Aug. 2026

California, United States

Web Developer

Dec. 2025 – Aug. 2026

- Built and maintained the organization's website (**React, TypeScript**, Vite, Tailwind/shadcn on **Vercel**): program, blog, gallery, and contact pages for a nonprofit serving students in Nepal.
- Shipped the donation system end to end: serverless API routes creating **Stripe** Checkout sessions for one-time and recurring gifts, a signature-verified Stripe webhook for payment and subscription events, and a token-protected admin dashboard for donation reporting.
- Prepared **funding pitches** and designed **sponsorship collateral** for donor and partner outreach.

Reinstalling Hope [501(c)(3) Non-Profit]

Aug. 2023 – Jan. 2025

Head of Website, Content, and Design

Ohio, United States

- Designed and launched the organization's website; delivered **10+ campaign proposals**, social media assets, and an e-book for the Save the Heritage initiative.

Projects

Bol | Python, local speech-to-text, local LLM, TTS, Claude Code hooks, macOS

2026

- Hands-free voice control for **Claude Code**: speak a task, hear back what the agent changed and what failed, fully on-device.

ScoutDeck | TypeScript, Next.js, Neon DB, AI copilot

2025

- Open-source **customer-discovery CRM**: hypotheses with confidence scores, interview pipeline, tagged evidence, AI copilot.

Technical Skills

Languages: Python, JavaScript/TypeScript (ES6+), Go, C++, SQL, HTML/CSS

Frameworks & Tools: React.js, Next.js, React Native/Expo, Node.js, Express.js, FastMCP, Litestar, LangChain, REST APIs

Cloud & DevOps: Google Cloud Run, Cloud Build, GitHub Actions, Terraform, Daytona, AWS, Vercel, Railway

Databases: PostgreSQL, MongoDB, Supabase, Neon, Elasticsearch, Redis, Arraylake (Zarr/Xarray)

Other: Model Context Protocol (MCP), LLM evaluation & benchmarking, STAC, PyTorch, Pydantic, Drizzle ORM, Figma

Authorized to work in the United States on Curricular Practical Training (CPT)