Prasant Koirala

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Education

University of Southern Mississippi — Hattiesburg, MS
Bachelor of Science in Computer Science, GPA: 4.0 — *Aug. 2024 – May 2028*

Technical Skills

Languages: Python, C++, C, SQL, JavaScript, TypeScript
Frameworks: React, Node, Expressjs, .NET
Tools: Git, REST APIs, Docker, Azure, OAuth 2.0, Jenkins, AWS

Experience

Web/App Development Intern — Jun. 2025 – Aug. 2025
Optimal Answers, LLC — *Gulfport, Mississippi, United States*

- Contributed to internal C# software by debugging and optimizing database navigation logic, enhancing UI responsiveness, and workflow efficiency for staff.
- Collaborated cross-functionally with the design and data teams to implement usability improvements and feature enhancements across the company's web and software platforms.
- Set up and deployed a full staging environment for the company's custom website, enabling safe testing and streamlined updates.
- Performed a comprehensive site backup and executed a targeted bug-fix rollout that improved site stability, reduced navigation issues, and boosted customer retention.

SAT Instructor — Jan. 2024 – Jul. 2024
Nepalese Encounters Education Consultancy — *Kathmandu, Nepal*

- Taught SAT prep to multiple student cohorts; averaged a 20% score increase.
- Experimented with quiz-generation tools to customize practice sets and measure outcomes.

Projects

Timeonar | ***C#, MySQL, TypeScript*** — Jan. 2025

- Developed Timeonar, an AI-powered literature timeline explorer leveraging Perplexity's reasoning AI model to generate chronological research timelines; built with a React + TypeScript frontend (Vite) and .NET 8 C# Web API backend, implementing progressive data enrichment pipelines that transform human language questions into structured timeline visualizations with methodology analysis, citation metrics, and source attribution.
- Architected a multi-stage AI orchestration system using deterministic prompt engineering and custom JSON extraction utilities to handle AI responses; implemented RESTful API endpoints, CORS configuration, progressive streaming, and health monitoring in C#, while designing an interactive React interface with responsive timeline visualization, real-time updates, and PDF export capabilities for academic research workflows.

Prep AI – Study Helper Website | ***React, Spring Boot, Node.js*** — Nov. 2024

- Built AI-powered education site offering Flashcard Generator, Schedule Builder, and Quiz Maker.
- Developed auto-generated quiz engine using large language models to simulate exam questions.
- Won 2nd Place at VOXO Hackathon for innovation in AI-assisted learning tools.

Spotify to YouTube Music Playlist Migrator | ***React, Django, MySQL*** — Jun. 2025

- Developed a full-stack playlist migration application using React.js frontend and Django REST API backend, implementing OAuth 2.0 authentication flows for both Spotify Web API and YouTube Music API, with cross-origin session management via localStorage and Base64 token encoding
- Built automated music catalog matching engine that processes Spotify playlist metadata, performs intelligent song search queries against YouTube Music's catalog using fuzzy matching algorithms, and creates corresponding playlists with comprehensive error handling and transfer status reporting

Personal Status Monitor | ***C++, Windows API, REST*** — Jun. 2025

- Built real-time desktop monitoring system using C++ and Windows API that tracks development activity and pushes status updates to the portfolio website via secure REST API
- Used Windows hooks and background services to prototype passive user feedback tools.
- Developed cross-platform web integration with threaded architecture, local HTTP server, and Vercel API endpoint featuring API key authentication and JSON data exchange