DINESH CHHANTYAL

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EDUCATION

University of Louisiana at Monroe   Monroe, LA
Bachelor of Science in Computer Science, Minor in Mathematics, GPA: 4.0 / 4.0   *Aug 2022 – Dec 2025 (Senior)*
  – OOP, Data Structure, Linear Algebra, Data Structures, Statistics, Database Management, Operating Systems, Computer Networks

EXPERIENCE

Full Stack Developer   Jan 2023 – Present
University of Louisiana - Monroe   *Monroe, LA*
  – Developed a custom **PHP/Drupal** module leveraging **OAuth 2.0** to sync **Microsoft Teams API** with the university's CMS, automating calendar and file-sharing workflows to resolve communication bottlenecks and increase student collaboration by **20%**.
  – Engineered a **Python/MySQL ETL pipeline** to transform and migrate **10,000+ legacy records** into **Drupal 10**, implementing data validation scripts and normalized schemas to reduce redundancy, accelerate query speeds by **15%**, and cut storage costs by **10%**.
  – Automated end-to-end testing for **50+ department webpages** using **Selenium** and **Cypress**, integrating tests into a **CI/CD pipeline** (GitHub Actions) to boost pre-deployment issue detection by **75%** and reduce post-launch user-reported errors by **30%**.

Software Developer   Oct 2022 – May 2023
Clamphook - EdTech Startup   *Lalitpur, NP*
  – Developed a **Flask** and **React**-based **Computer-Based Testing (CBT)** platform with **Redis session caching** and **Nginx load balancing**, enabling **5,000+ concurrent users** and driving a **40% reduction in server latency** to support **5x enrollment growth**.
  – Architected a **Docker-based microservices infrastructure** for Flask backend APIs and React admin panels, automating **CI/CD pipelines** with **GitHub Actions** to deploy a **React Native iOS app** that achieved **5,000+ downloads** and **99.9% uptime** post-launch.
  – Designed a real-time metrics dashboard using **Chart.js** and **Flask-SocketIO**, integrated with **PostgreSQL query optimizations**, to increase student consistency by **8%** and content efficiency by **25%** through actionable data insights.

Frontend Developer   Oct 2021 – Dec 2021
Padhao Academy   *Remote (Kathmandu, NP)*
  – Built a **Next.js/TypeScript**-based **RBAC system** with **JWT encryption** and **OAuth 2.0** integration, eliminating unauthorized access vulnerabilities and achieving **100% compliance with GDPR standards** for **5,000+ users**.
  – Reduced critical bugs by **90%** by designing **Postman test suites** and peer review workflows, slashing post-deployment user-reported issues by **40%** across **15+ application modules**.
  – Collaborated with designers via **Figma** to implement a **Carbon Design**-based interface with dynamic math rendering using **KaTex**, while streamlining deployments via **GitHub Actions CI/CD** to cut release cycles by **30%** and accelerate feature delivery.

PROJECTS

- **NoteMeet** — Developed an **AI-powered meeting note-taking platform** that automates **transcription**, **summarization**, and **organization** of meeting notes. The platform integrates with **browser extensions** to record meetings, transcribe audio using **AWS Transcribe**, and store notes securely in **Amazon S3**. By leveraging **AWS Lambda** for **serverless processing** and **DynamoDB** for **real-time data access**, the system reduces manual note-taking effort by 80% and improves meeting productivity. — Link

- **TimeClock** — Built an **enterprise-grade time management system** to streamline **employee attendance tracking** and **workforce management**. The system features **real-time GPS tracking**, **role-based access control**, and **automated reporting**, enabling managers to monitor attendance effectively. Additionally, the platform provides **next payday**, **payment summaries**, and insights into **departmental projects** and **employee expenses**. — Link

- **Amazon Clone** — Created a **full-stack e-commerce platform** mimicking Amazon's **core functionality**, including **user authentication**, **product listings**, and a **secure payment system** powered by **Stripe**. The application uses **React.js** for the **frontend** and **cloud functions** for backend processing, delivering a seamless shopping experience with 90% uptime. — Link

- **Prime Number Theory Research** — Conducted research under Dr. Jemin Shim on the **Meissel-Lehmer algorithm** and **Prime Counting Functions** using **Python** and **NumPy**, achieving efficient prime counting up to 10^{18} in **314,900 seconds**. Created visualizations to compare the efficiency of five different prime counting methods using **Matplotlib**. — Link

- **Trip Planner** — Designed a **trip planning application** that helps users optimize **travel routes** by adding **destinations and activities**. Integrated **Google Maps API** for **route visualization** and implemented the **Dijkstra algorithm** to calculate the most efficient paths, reducing travel planning time by 40%. — Link

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Java, Assembly
Embedded Systems: ADC/DAC, PWM, I2C, SPI, RS232, Hardware Debugging
Development Tools: Oscilloscope, Function Generators, Git, Test Automation
Software Engineering: System Design, Firmware Development, Test Documentation

ACTIVITIES & CLUB INVOLVEMENT

- **Google Developer Group on Campus ULM, President**   Aug 2024 – Present
- **ICPC NA South Division 2024, State Champion**   Nov 2024
- **MAA LA/MS Section Meeting, Integration Bee Third Place**   Feb 2024
- **Association for Computing Machinery (ACM), Member**   Aug 2022 – Present