Bipul Adhikari

Hattiesburg, MS | bipul.adhikari.2003@gmail.com | 980-446-7996 | bipuladk60.github.io/MyPortfolio |
linkedin.com/in/bipul-adhikari | github.com/bipuladk60

Education

University of Southern Mississippi, BS in Computer Science & Mathematics *Expected May 2027*
GPA: 3.944

Experience

Software Engineering Intern, *CadenceAI* *Mar 2025 – Present*

- Built a React-based frontend aligned with Figma UI/UX designs and integrated Auth0 for secure authentication.
- Leveraged Azure Communication Services for integrated messaging and notifications, and employed Azure Blob storage for scalable data storage and retrieval.
- Engineered a FastAPI backend and leveraged RabbitMQ (AMQP) to manage asynchronous tasks.
- Utilized Git for version control, facilitating efficient collaboration and shorter iteration cycles within the engineering team.
- Employed TanStack Form, TanStack Query, and Zod Schema to enhance frontend state management and data fetching.

Full Stack Developer, *Gulf South Center for Community Engaged Health Research* *Aug 2024 – Present*

- Enhanced Bridz2U app's Vue.js frontend for intuitive interfaces, boosting user engagement by 30% by simplifying flows.
- Integrated Ruby on Rails (MVC) backend to streamline data flow, achieving 70% faster health updates.
- Deployed on AWS LAMP stack for scalability and high availability under fluctuating usage loads.
- Adopted Agile stand-ups with GitLab CI/CD, improving collaboration and reducing feature release cycles.

Projects

Predicting COPD Risk from PFAS Exposure Using Machine Learning Models *Jul 2024*

- Employed statistical methods to study correlations between PFAS exposure and COPD, integrating findings into machine learning models to predict COPD risk.
- Tools: Matplotlib, Log-transformation, Normalization, SMOTE, Random Forrest, Gradient Boosting, Logistic Regression

DrugLytics – Hacklytics 2025 (GitHub) (Submission) *Feb 2025*

- Created multi-agent platform to analyze drug interactions for safer prescriptions and explain using animation.
- Tools: Flask, Django, MongoDB, Manim, RDKit, Cloudflare, AWS, Streamlit, Gemini, OpenAi, Generative AI

Chama: Crypto Literacy – HackPrinceton 2024 (GitHub) (Submission) *Nov 2024*

- Developed a web app featuring real-time candlestick charts, sentiment analysis, and multi-chain transactions;
- Tools: React, Next, Tailwind, LanceDB, LlamaIndex, FastAPI, Vercel, Onchainkit, polygon.io, Gemini, GoDaddy

CleanLabel: iOS Scanner App – Hatchathon 2023 & Golden Eagle Pitch (GitHub) (Website) *Nov 2023*

- Built a SwiftUI-based scanner app(along with Landing Page) that identifies harmful ingredients present in packaged foods.
- Tools: SwiftUI, Express.js, PostgreSQL, Azure, React, Tailwind, XCode, Github, OpenCV, Vision, Pandas, Python

RNN for Music Generation (GitHub) *Jul 2024*

- Developed a sequence-to-sequence RNN model with LSTM layers to compose music in ABC notation.
- Tools: TensorFlow, Keras, Comet.ml, Scipy, Numpy, TQDM, Python, Machine Learning, RNN.

Awards

- **Undergraduate Symposium for Research and Creative Activity (2nd place - USM)** *Apr 2025*
- **Professionalism/ Work Ethics Award (The University of Southern Mississippi)** *Apr 2025*
- **Best Use of OnChainKit (HackHeist HackPrinceton 2024 - Princeton University)** *Nov 2024*
- **2023 Hatchathon | Tech for Social Impact ($2.5K out of 50+ teams - USM)** *Nov 2023*
- **Golden Eagle Idea Pitch 2024 ($1K for CleanLabel - USM)** *May 2024*

Technical Skills

- **Languages:** Python, JavaScript, TypeScript, C++, C#, Java, PHP, Swift, SQL
- **Web/ML:** React, Next.js, Vue, Node.js, Express, FastAPI, Ruby on Rails, TensorFlow, Keras, SciPy
- **Cloud/DevOps:** AWS, Azure, Docker, Kubernetes, CI/CD (GitLab/Azure)
- **Databases:** MySQL, PostgreSQL, MongoDB, LanceDB, Supabase, Firebase, Databricks