

Bimarsh Bhusal

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Education

Computer Science, *University of Southern Mississippi*

08/2023 – 05/2027

Projects

Transfer Student Credit Management App,

08/2023 – present

Web Application Development for USM School of Computing Sciences and Computer Engineering

- Designed and developed a feature-rich web application using Node.js and Express framework.
- Implemented server-side rendering using Next.js for improved performance and SEO optimization.
- Leveraged PostgreSQL for efficient relational database management.
- Utilized Amazon S3 for secure data storage and CloudFront for content distribution.
- Implemented reverse proxy on an EC2 instance, ensuring optimal hosting for Node.js applications.

Veggies, The Farmers' App, *Mobile Application for Plant Disease Detection and Weather Alerts*

01/2022

- Designed and developed a mobile app using React Native for front-end and Django for back-end, integrating machine learning models to detect plant diseases.
- Enhanced user experience by adding push notifications for extreme weather alerts.
- Collaborated with local farmers for app testing and presented it at Yomari Code Camp, Kathmandu University.

Bhetghat, A Food App, *Android Application for Food Delivery*

12/2021

- Created an Android app using React Native for cross-platform compatibility.
- Employed Firebase and Node.js for back-end and database management, implementing GPS-based location tracking and OAuth for secure user authentication.
- Successfully deployed the app on the Play Store, optimizing restaurant sales and customer reach.

Professional Experience

Undergraduate Researcher,

09/2023 – Present

School of Computing Sciences and Computer Engineering, University of Southern Mississippi

- Collaborated closely with a team of fellow undergraduate researchers under the guidance of Dr. Nick Rahimi.
- Analyzed user behavior to identify and mitigate anomaly activities and insider threats within organizations.
- Utilized the CERT Insider Threat dataset, incorporating user activity logs for comprehensive analysis.
- Contributed to the development of research methodologies and strategies for achieving project objectives.
- Currently co-authoring a research paper on this topic, highlighting collaborative research skills and teamwork.

Mobile Application Developer, *Plato Academy of Law*

12/2021 – 11/2022

- Led Android app development for LLB, LLM, BA LLB, and Advocate License exam prep, impacting 200+ students.
- Utilized React Native, Node.js, Firebase for cross-platform app, integrating auto-exam scheduling, rankings, and teacher reviews.
- Engineered an admin role for dynamic question sets, mock test scheduling, and seamless payment verification.

Skills

Programming Languages and Frameworks (C++, Python, NodeJS, JavaScript ES6+, Django, ExpressJS, React, React Native, NextJS, Redux)

Cloud Services, Database and Other (PostgreSQL, Git, Amazon Web Services, Google Cloud Services, Android Studio, Firebase, Material Design, UNIX/Linux, Vim)

Certificates

- JavaScript Algorithms and Data Structures [🔗](#)
- Scientific Computing with Python [🔗](#)
- Frontend Development Libraries [🔗](#)
- Data Analysis with Python [🔗](#)
- Data Visualization [🔗](#)
- Responsive Web Design [🔗](#)
- Backend Development and APIs [🔗](#)
- Machine Learning with Python [🔗](#)

Awards

Creatica 2022 Hackathon Winner, *Major League Hackathon (MLH)*

05/2022

Mahatma Gandhi Scholarship, *Indian Embassy*

03/2021