Sagar Pathak

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Education

University of Memphis, US |*MS in Computer Science*

Kathmandu University, Nepal |*BE in Computer Engineering*

Skills

- **Programming**: JavaScript, Python, Java, Rails
- **Framework & Library**: React.js, Next.js, Express.js, Grails, MaterialUI, Redux, D3.js, React Native
- **Database**: MySQL, PostgreSQL, Microsoft SQL
- **Others**: AWS EC2, S3, Atlassian Bamboo, Jenkins

Work Experience

University of Memphis |*Graduate Assistant* Jan 2022 - Present

- Worked as a teaching Assistant for Computer Security, Network Security, and Foundations of Data Science courses.
- Developed and managed Moodle-based cyber education web application for CTG project.
- Developed web and mobile application for Multi-User Access control research project using React and React Native.
- Designed lab exercises for computer and network security courses.
- Working on the Computer Education Cybersecurity Infrastructure Project (CECIP)

Inspiring Lab |*Co-founder and Senior Software Engineer* May 2020 - Aug 2021

- Completed the front-end project for RTVTR (Real Time Vehicle Tracking System), implementing intuitive user interfaces and leveraging advanced technologies such as ReactJS and Redux.
- Developed the system architecture for a logistic management system, streamlining logistics processes through innovative technologies and scalable design.
- Contributed to the development of several projects, including Hajiri, FaceRecognition, WhatIsThis?, and TextToSpeech, leveraging a diverse set of programming languages and frameworks to deliver high-quality software solutions.

Zakipoint Health Inc. |*Principal Software Engineer* Jul 2018 - Apr 2020

- Developed and implemented Zakipoint's in-house software, exceeding client expectations with a high-performing solution delivered on time. Resulted in heightened client satisfaction and successful software adoption.
- Conceptualized and developed proof of concepts (POCs) for new features in an existing web application, assessing the viability and feasibility of proposed features.
- Translated designs and wireframes into high-quality code, leveraging expertise in HTML, CSS, and JavaScript to create responsive and visually appealing interfaces.
- Led and motivated a team of six developers to deliver customer-focused solutions, fostering a collaborative and goal-oriented environment.
- Practiced agile methodologies, including Scrum, to effectively manage project timelines, prioritize tasks, and ensure timely delivery of high-quality software.

Verisk Health Inc. |*Software Engineer* Jan 2015 - Jun 2018

- Improved in-house database processing pipeline efficiency by 87% in the Wallet Linkage project, optimizing query performance and reducing latency through strategic indexing and query optimization techniques.
- Designed and developed an internal employee directory web application for the company, streamlining employee search and communication processes.
- Successfully managed database operations processes, ensuring data integrity, security, and availability while troubleshooting and resolving issues as needed.
- Mentored and advised new interns and trainees, fostering a collaborative and supportive learning environment while imparting best practices and technical expertise.
- Worked on the Claims Intelligence web application (ClaimSearch 2.0), delivering an enhanced user experience through advanced data visualization and analysis tools.

Projects

- MUAC: Multi-User Access Control website and mobile application built using React and React Native for the research project.
- Electro Lab: It is a web application dedicated to Do-It-Yourself (DIY) projects, aiming to empower users with step-by-step guides for creating various innovations independently. (https://github.com/sagar-pathak/electro-lab)
- Financial Crime Detection: A Machine Learning Approach to Anomalous Financial Transaction Detection using SWIFT synthetic dataset (https://github.com/sagar-pathak/financial-crime-detection)
- Enhanced Deep Q-Learning for 2D Self-Driving Cars: Implementation and Evaluation on a Custom Track Environment (https://github.com/sagar-pathak/rl-dqn-2d-car-racing)
- Customer Churn Risk Prediction: This project aims to classify customers into high, medium, and low churn risk categories. (https://github.com/sagar-pathak/customer-churn-prediction)

Awards and Recognition

- Finalist in Big Data Student Case Competition hackathon organized by the University of South Carolina, 2024.
- Winner of AI Expo Nepal 2019, our project RTVTR (Real Time Vehicle Tracking System) won Nepal's first and biggest AI Exhibition.
- Received Verisk "Way to Go" award in 2018 for optimizing processes and introducing innovative techniques in the Wallet Linkage project.
- Award of excellence for ClaimSearch 2.0 project in recognition of exceptional performance in 2015.