BIRAJ SILWAL

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Experience

Fullstack Developer,
📅 Apr 2020 - Present
School of Engineering, UNM
- Develop a full stack web app that makes it easier for students to stay informed about support services and events serving **1,400+** engineering students with **9,500+** page views within 14 months.
- Technologies: **React**, **MongoDB, Strapi,** JSON Web Token **(JWT), AWS.**
- Use agile methodologies to continuously plan, design, and program the UI/UX resulting in enhanced user satisfaction ratings from **60% to 95%**.
- Create questionnaires and conduct user interviews to identify and analyze current user experiences and pain points.

Research Intern,
📅 Jun 2021 - July 2021
Purdue University
- Collaborated with 4 team members in a 7-week human-AI teaming cyber-physical system experiment to understand the relationships between trust, workload, transparency, and different level of autonomy.
- Implemented a higher level of autonomy and deployed an updated web-based simulation on Amazon Mechanical Turk using **PHP** and **JavaScript**.
- Designed experiment, deployed simulation and reported results on a 3-week timeline.

Fullstack Developer,
📅 Feb 2021 - Aug 2021
Kizmet.cc (Startup)
- Developed a web application in **VueJS, Python, MongoDB, and NodeJS.**
- Led, designed, and developed front-end by creating flexible, extensible, and loosely coupled components and implemented **Flux architecture** for global state management with reactive components using Vuex.
- Created **Python** script to populate **1+ million** demo users to simulate real-world performance.

Virtual Insight Series,
📅 June 2020 - July 2020
Goldman Sachs
- Received training in professional development, introduced to networking best practices, interview best practices, and exposure to the intersection of finance and technology.

Projects

Chili House,
📅 Nov 2020 - Present
NASA MINDS project
- Serve as elected **co-president** and **co-lead** a team of **11** interdisciplinary team members with a goal to develop innovative techniques for growing crops in space.
- Write **Python** script to simulate microneedle moisture sensors in the plant that publishes moisture and temperature values to the Swarmie robots.
- Established timeline and **$1,500** budget, and deligated tasks for an on time completion of a 16-week project under budget. (for Nov 20- Mar 21)

Leadership

- **Teamlead**, Food Recovery App, Lead a team of **4** to build an Android/iOS (React Native) app to reduce food insecurity on-campus. In 2021, UNM has **~6,000 (~31.7%)** food insecure students.
  📅 Sept 2021 - Present
- **Secretary**, National Society of Black Engineers (NSBE), University of New Mexico chapter.
  📅 Jul 2020 - Present

Education

B.S. in Computer Science
Minor in Economics
University of New Mexico (**UNM**)
GPA: 3.66 / 4.0
Graduation: May 2022

Advanced Software Engineering
CodePath.org

Coursework

Algorithms • Data Structures • Object Oriented Programming • Software Design • Operating System • Machine Learning • Computer & Network Security • Linear Algebra • Set Theory & Probability

Technical Skills

Programming
Strong: Java • Python • JavaScript
Familiar: C/C++ • Bash • JSON • SQL

Frameworks/Libraries
React • Vue • React Native

Tools
Git • AWS (EC2, Amplify, S3, Route 53) • Redis • Nodejs • REST API • MongoDB • Debian Linux

Other skills
Object Oriented Design • UI/UX • Frontend • Backend • Cloud Computing • Scrum • Teamwork & Collaboration • Agile Methodology • Web Technologies

Honors & Awards

- **1st** place out of 35 teams in NASA MINDS competition for Overall Design, Build, and Demonstration, 2020-2021
- **Finalist** for the 2019-20 UNM Mobile App Contest out of 22 teams, 2020
- **Finalist** at FIRST Robotics Competition Central Illinois Regional – one of the 63 regional competitions around the USA, 2018