

BIRAJ SILWAL (Willing to relocate)

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Experience

App Developer

School of Engineering, UNM

📅 Apr 2020 - Present

- Developed a full stack Progressive Web Application (PWA) using **React**, **MongoDB**, **Keystone.js** serving **950+** engineering students with **11,800+** page views.
- Created questionnaires and conducted user interviews to identify and analyze current user experiences and pain points.
- Used agile methodologies to continuously plan, design, and program the UI/UX and enhanced user satisfaction ratings from **60% to 95%**.
- Deployed an app (success.unm.edu) to Amazon Web Services (AWS) EC2 instance.

Teaching Assistant

Department of Computer Science, UNM

📅 Aug 2020 - Present

- Engage with students to explain concepts regarding Object-Oriented Programming System, Exception Handling, Java Collections, and JavaFX.
- Hold office hours, grade assignments, and answer student questions.

Projects

Distributed Auction, Desktop Application

📅 May 2020

- *Description:* A system of multiple Auction Houses selling items, multiple Agents buying items, and a Bank to keep track of everyone's funds.
- *Role:* Implemented **Java** Socket, Synchronization, and Thread to concurrently run multiple Auction Houses to communicate with multiple Agents and a Bank, as a member of a three-person team.

Online Marketplace, Android Application

📅 Dec 2019 - Jan 2020

- Used **Java** to develop an online marketplace to buy and sell items among college students.
- Implemented *Parse User* authentication and created an online chat service.
- Used *Parse Server* as a back-end and deployed an app to Heroku.

Sentiment Analysis, Machine Learning Application

📅 May 2021

- Built a machine learning model that classifies a tweet into positive and negative sentiment using the **Naïve Bayes Classification** algorithm.
- Trained the ML model with 10,270 tweets resulting in **75%** test accuracy.

Image Classifier, Machine Learning Application

📅 Oct 2019

- Collaborated with a team of two other graduate students to build a machine learning model that classifies and recognizes AprilTag image using the **Convolutional Neural Network (CNN)** algorithm.
- Trained the system with over 5,010 AprilTag images resulting in a **92%** performance accuracy.

SimpleTweets, Android Application

📅 Nov 2019

- Developed an android app that allows user to sign in to Twitter, post a new tweet, and view their Twitter timeline.
- Implemented "AsyncHttpClient library" to send an asynchronous request to "Twitter **REST** API" and OAuth to authenticate users.

Education

B.S. in Computer Science

Minor in Economics

University of New Mexico (UNM)

GPA: 3.5 / 4.0

Graduation: May 2022

Advanced Software Engineering

CodePath.org

Coursework

Object-Oriented Programming • Algorithms • Data Structures • Software Design • Machine Learning • Computer & Network Security

Languages

Proficient: Java • Python • JavaScript

Familiar: C/C++ • Bash • SQL • GO • JSON • XML

Framework: React • Vue • Bootstrap • MaterialUI

Skills

Object-oriented design • UI/UX • Web Application • Android • Frontend • Backend • Scrum • Docker

Technologies

Git • AWS • MongoDB • Visual Studio • Android Studio • Figma • Heroku • GraphQL

Honors & Awards

- **1st** place out of 35 teams in NASA MINDS for Overall Design, Build, and Demonstration, 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