BIRAJ SILWAL

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EDUCATION

Bachelor of Computer Science
University of New Mexico (UNM)
GPA: 3.6 / 4.0
Expected: May 2022

COURSEWORK

Programming • Algorithms • Linear Algebra • Set Theory & Probability • Machine Learning • Computer & Network Security • Principle of Artificially Intelligent Machine • Software Design

LANGUAGES

Proficient: Java • Python • JavaScript • HTML • CSS • Bash

Familiar: C/C++ • R • SQL • Dart • Go • XML • JSON

SKILLS

Algorithms • Data Structures • OOP • UX/UI • Web Application • Android Application • Bootstrap • Front-End • Back-End • AWS

TECHNOLOGIES

PWA • React • Vue.js • Node.js • REST • MongoDB • GraphQL • Debian Linux • Git • Terminal • Visual Studio • Android Studio

AWARDS & HONORS

• Accepted to UNM *El Puente* Research Fellowship out of 78 applicants, 2020
• 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

EXPERIENCE

App Developer, UNM School of Engineering   📅 Apr 2020 - Present

- Developed hybrid app (android, ios, and web) using **ReactNative** framework, **MongoDB** as a back-end, and Parse Server as a BaaS
- Created and conducted user interviews and questionnaires to identify and analyze current user experiences and pain points
- Used agile software engineering methods to enhance the UI/UX of an app
- Deployed an app (success.unm.edu) to Amazon Web Services (AWS) EC2 instance
- Planned, designed, and programmed the UI/UX with a **95%** user satisfaction rating

Teaching Assistant, Department of Computer Science, UNM
Intermediate Programming using Java (CS251L)   📅 Aug 2020 - Present

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

IT Assistant, University of New Mexico   📅 May 2019 - Aug 2020

- Used QUERY and other Google Sheets formulas connecting multiple sheets to manage student-related data of 60-80 students
- Designed User Interface (UI) of student profile dashboard by creating different charts in Google Sheets to track student's academic progress
- Ensured users are highly satisfied; Met and exceeded expectations

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

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 10,000 images resulting in a **80%** performance accuracy

Online Marketplace, Android Application   📅 Dec 2019 - Jan 2020

- *Description*: Used **Java** to develop an online marketplace for students to post an item to sell or see posted item to buy directly from other 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

SimpleTweets, Android Application   📅 Nov 2019

- *Description*: 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