BIRAJ SILWAL

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EDUCATION

Bachelor of Computer Science
University of New Mexico (UNM)
GPA: 3.563 / 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 • Heroku

TECHNOLOGIES

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

EXPERIENCE

App Developer, UNM School of Engineering   📅 Apr 2020 - Present
- Developed Server-Side Rendering (SSR) Progressive Web Application (PWA) using **Vue.js** framework (Nuxt.js) as a front-end and MongoDB as a back-end
- Created and conducted user interviews and questionnaires to identify and analyze current customer 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

Lab Assistant, UNM Moses Biological Computation Lab   📅 Oct 2019 - Present
- Collaborated with a team of three other graduate students to create Convolutional Neural Network (CNN) based image classifier using **Python** and Tensorflow
- Deployed trained models into the robot and documented the outcomes
- Created and manipulated data sets of thousands of images to train machine learning model

Teaching Assistant, Department of Computer Science, UNM
📅 Aug 2020 - Present

- Engage with students per week to clarify concepts and answer questions regarding Object-Oriented Programming System, Exception Handling, Java Collections, and JavaFX during in-class activities
- Grade assignments and tests on **Java** programs

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

myLobo, **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 a Twitter clone app that allows a user to view Twitter timeline using **Java**
- Implemented "AsyncHttpClient library" to send an asynchronous request to "Twitter **REST** API"
- User can sign in to Twitter using OAuth login and can post a new tweet

AWARDS AND HONORS

2020   Accepted to UNM *El Puente* Research Fellowship out of 78 applicants
2020   Finalist for the 2019-2020 UNM Mobile App Contest out of 22 teams
2019   Admitted to Honors College, University of New Mexico
2018   Finalist at FIRST Robotics Competition Central Illinois Regional – one of the 63 regional competitions around the USA
2014 - 15   Won six national science competitions as the President of the GoldenGate Robotics Club, Nepal