

BINISH KOIRALA

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EDUCATION

Bowling Green State University, Bowling Green, OH

Graduation Date: May 2020

- MS in Computer Science

Tribhuvan University, Kathmandu, Nepal

Graduated: February 2017

- BS in Electronics Engineering (Specialization in Computer Science)

SKILLS

- **Languages:** Javascript, Python, SQL, NoSQL, Git, jQuery, Node, Bootstrap, Java.
- **Tools:** Visual Studio Code, Django, MongoDB, PostgreSQL, Jupyter Labs, PySpark/Pandas, Android Studio, Gitlab, Jenkins, MySQL Workbench, Linux, Mac OS, Gitlab CI

PROFESSIONAL EXPERIENCE

Full Stack Software Developer Intern – Senecio Software Corp, Bowling Green, OH May 2019 – Present

- Designed a SQL database schema and developed a REST API using Node conforming with ES6 standards.
- Added Stripe integration to backend for processing payment using Stripe elements in the frontend.
- Implemented unit testing using Mocha and Chai, performed API testing with Postman and deployed the API on a server running on CentOS 7.
- Collaborated with Android developers to develop an app in Android Studio.
- Worked under Agile methodology to deliver each week with weekly reports and discussion.

Graduate Teaching Assistant – Bowling Green State University, Bowling Green, OH August 2018 - Present

- TA for Computer Organization and Architecture, Algorithms and Data Structures, and Object-oriented Programming
- Prepared assignments, graded tests and conducted lab sessions for Object-Oriented Programming.

PROJECTS

AugVents - Augmented Reality Application

- An app to combine local music events with augmented reality.
- Worked on the backend to develop a REST API using node.js, express.js and postgres.
- Lowered delay caused by requests through the use of caching and Room Persistence Library to store data in the android app.

ShellShots - Turtle Identification Web Application

- App used for turtle research and presented at the 17th Annual Symposium, Turtle Survival Alliance Conference.
- Built using Django, MySQL, Javascript and Bootstrap.
- Designed and developed a user profile system including a turtle image upload portal.
- Implemented SURF and Watershed image recognition techniques to identify individual box turtles from uploaded images and notified users via email and push notifications.
- Created a REST API and assisted iOS developers in development of the app.
- Performed unit testing using the unittest module and implemented Continuous Integration using Gitlab CI.

MyRide - Vehicle Traffic Congestion Detection Using Image Processing

- Collected images of vehicles and developed a Haar feature based cascade classifier.
- Used the classifier to live traffic video stream and calculated congestion in real time.
- Computed most efficient routes based on obtained congestion information.
- Developed a website to inform end users about current road traffic conditions.

VisualLock - Graphical Password Authentication Method

- Developed a system using PyQt that uses pictures for authentication.
- Hashed and stored the passwords which are in the form of click points within images.
- Applied the system to generate password for AES encryption of user files.