

# BINISH KOIRALA

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## EDUCATION

**Bowling Green State University**, Bowling Green, OH  
Master of Science in Computer Science

Graduation Date: **May 2020**  
GPA: **3.91/4.0**

**Tribhuvan University**, Kathmandu, Nepal

Bachelor of Science in Electronics Engineering (Specialization in Computer Science)

Graduated: February 2017

## SKILLS

**Languages:** JavaScript, Python, SQL, NoSQL, Git, jQuery, Node, Bootstrap, D3.js, Java.

**Tools:** Visual Studio Code, Django, MongoDB, PostgreSQL, Jupyter Labs, PySpark/Pandas, Android Studio, Gitlab, Jenkins, MySQL Workbench, Linux, Mac OS, Gitlab CI, Selenium.

## WORK EXPERIENCE

**Full Stack Software Developer– 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.
- Designed and developed an android app in Java to consume the data from the API.
- Added Stripe integration to backend for processing payment using Stripe elements in the frontend.
- Unit testing with Mocha and Chai, and API testing via Postman. Deployed the API on a server running on CentOS 7.
- Worked under Agile methodology to deliver each week with reports and discussion.

**Graduate Teaching Assistant – Bowling Green State University, Bowling Green, OH**

**August 2018 - Present**

- TA for Introduction to Software Engineering, Algorithms and Data Structures, and Object-oriented Programming
- Prepared assignments, graded tests and conducted lab sessions for Object-Oriented Programming.

**Junior Software Developer– Rooster Logic Pvt. Ltd., Kathmandu, Nepal**

**April 2017 – Feb 2018**

- Worked towards development of an E-learning application for schools using JavaScript, HTML5/CSS.
- Collaborated with team members to develop websites for local businesses.

## 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 PostgreSQL.
- Used Redis to implement caching on the server which boosted performance.
- Decreased network usage by 80% and speeded up lookup by using caching and Room Persistence Library 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, GitLab CI and Bootstrap.
- Designed and developed a user profile system including a turtle image upload portal.
- Implemented SURF algorithm to identify individual box turtles and notified users via email and push notifications.
- Created a REST API and assisted iOS developers in development of the app.
- Unit testing performed using the unittest module and web app tested via Selenium.

### MyRide - Vehicle Traffic Congestion Detection Using Image Processing

- Collected images of vehicles and developed a Haar feature based cascade classifier.
- Applied the classifier to a live traffic video stream and calculated congestion in real time.
- Labelled routes based on degree of congestion using OpenStreetMap.
- Informed end users about current road traffic conditions through a Website.

### VisuaLock - 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.

## OTHERS

Recipient of Helen and Barney Wood Scholarship at Bowling Green State University.