SUPRATIK NEUPANE

supratikn1997@gmail.com
linkedin.com/in/sneupane1997
https://supratikn.github.io
github.com/supratikn

EDUCATION

State University of New York At Buffalo — **Fall 2016 - Fall 2019 (Expected)**

BS in Computer Science

- Dean's List
- Honor's Scholar
- Cumulative GPA: 3.86/4.00

Relevant Courses

- Data Structures
- Machine Learning
- Programming Languages
- Algorithm Design
- Quantum Algorithms
- Software Quality

WORK EXPERIENCE

ANDROID, FIREBASE, JAVA, XML

Niagra Frontier Transportation Authority, Buffalo NY — **June 2018 - September 2018**

Mobile Developer, NFTA Bus Stop Condition App

- Aided in surveying conditions of NFTA bus stops
- Used queries and Google Play-services to map the bus stops to precise locations.
- Used Google Firebase Database and Firebase Storage to host a server that records all the submissions, including images, made by NFTA employees through the app.
- Managed a database of over five thousand entries for bookkeeping purposes.

RESEARCH, COQ, OCAML

University at Buffalo — **May 2018 - Present**

Undergraduate Research Assistant,
Formal Verification of Randomized Programs

- Learned to use Coq to formally prove theorems and algorithms.
- Worked with Dr, Marco Gaboardi to verify randomly generated Cryptography and Security programs.
- Used Coq to verify Probabilistic Models of Machine Learning algorithms.

LEADERSHIP, TEACHING, JAVA, JAVASCRIPT, OCAML, PYTHON

University at Buffalo — **August 2017 - Present**

Undergraduate Teaching Assistant

- Run recitations and hold office hours each week for Intro to CSE 116: Computer Science (I and II) (175-students), CSE 305: Programming Languages (80) and CSE 442: Software Engineering Concepts (15).
- Help debug their Java/Python/OCaml code and demonstrate good coding practices.
- Run review sessions before exams and deadlines.
- Grade handwritten exams and set up auto-grader for programming assignments.
- Manage teams for group projects like a project manager and monitor the scrum board.

PROJECTS

C++, HTML

HTML Parser/ Validator

- Takes an HTML file and based on tags, spacing, titles and IDs, checks if is it a valid HTML.
- If the HTML file is valid, creates a DOM tree based on all the HTML tags

PYTHON, STANDARD ML

Language Interpreter

- Built an interpreter program that takes input from a text file and stores it as a stack of commands.
- Using functional programming computed the results of these commands.

UNITY 3D, UNREAL ENGINE 4

M.I.A.

- A story driven game where the protagonist is a powerful android who seeks to bring people and androids together through compassion and diplomacy instead of brute force. (Currently in the process of extending it to Unreal Engine)

NODE.JS, PYTHON

App Store Crawler

- Starting from an app, finds a way to get to a specific app with the shortest possible page jumps by using Beautiful Soup to create a bidirectional graph and Dijkstra's algorithm to compute the path.
- Stores all the apps in a path as nodes of an undirected graph.