

# SUPRATIK NEUPANE

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<https://supratikn.github.io>

[github.com/supratikn](https://github.com/supratikn)

## EDUCATION

### State University of New York At Buffalo

August 2016 - December 2019 (Expected)

BS in Computer Science

Relevant Courses

- Dean's List
- Honors Scholar
- Cumulative GPA: 3.8/4.0
- Algorithms
- Machine Learning
- Programming Languages
- Data Structures
- Software Engineering
- Software Quality

## WORK EXPERIENCE

### Google LLC, Sunnyvale CA

May 2019 - August 2019

Software (Site Reliability) Engineering Intern

- Developed means of preventing service outages caused due to internal group membership expirations by augmenting the expiration notifier such that impending expirations could be filed as high priority bugs rather than being limited to email, thus monitored more effectively
- Implemented a tool that extracts and obfuscates broken files from the Vault for G Suite mail conversion job that uses third party software without source code so that the extracted files can be used for further debugging or filing bugs upstream

PROJECT DESIGN,  
GO, JAVA

### University at Buffalo

August 2017 - Present

Head Undergraduate Teaching Assistant

- Guide students through their coding and problem solving assignments for CSE 115/116: Intro to CS (600 students in one semester), CSE 305: Programming Languages (175), CSE 331: Algorithms (250) and CSE 442: Software Engineering (150) by leading labs and recitations
- Mentor teams for Agile Development group projects by mandating stand-up meetings, monitoring Scrum boards and assigning tasks

LEADERSHIP,  
TEACHING,  
C++, JAVA,  
PYTHON, SCALA

## PROFESSIONAL PROJECTS

### Niagra Frontier Transportation Authority, Buffalo NY

June 2018 - September 2018

NFTA Bus Stop Condition App

- Aided NFTA employees in surveying bus stop conditions by developing an Android app that automates the process to a real-time online database on Firebase
- Precisely mapped the location of NFTA bus stops on Google Maps to their actual geographical coordinates using Google geo services such that they complied with the American Disability Act

ANDROID,  
FIREBASE,  
JAVA, XML

### University at Buffalo

May 2018 - May 2019

Formal Verification of Randomized Programs

- Automated proof of correctness for various Cryptography and Security programs from handwritten to programmatic through Coq
- Extracted the probabilistic models of the Machine Learning algorithms in these programs and substantiated that they produce < 10% errors on randomly bias data sets

RESEARCH,  
MACHINE LEARNING,  
OCAML, COQ

## PERSONAL PROJECTS

### Handwritten Digit Recognizer

- Recognizes handwritten digits with upto 94% accuracy from over 60,000 data points through a deep neural network designed using SciPy and TensorFlow

MACHINE LEARNING,  
PYTHON

### HTML Parser/ Validator

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

C++, HTML

### Functional Language Interpreter

- An interpreter program that takes text input containing arithmetic, logical and functional commands for data sets in post-fix notation and functionally computes the result in a stack

PYTHON,  
STANDARD ML

### UBulletin

- An interactive announcement platform for any club related events that is open to all University at Buffalo students and faculty

REACT,  
NODE.JS