

# ALEXANDER GURUNG

## CONTACT

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## EDUCATION

### Georgia Institute of Technology · Aug. 2020 to Current

#### MS Computer Science 2022

Concentration in Machine Learning

Relevant Coursework: Computational Science and Engineering Algorithms

### Georgia Institute of Technology · Aug. 2018 to Current

#### BS Computer Science 2020

##### Linguistics Minor

Relevant Coursework: Machine Learning, Artificial Intelligence, Computational Linguistics, Probability & Statistics, Game AI

GPA (Weighted) — 3.85/4.0

Member of Honors Program

### TJHSST · Aug. 2014 to June 2018

#### High School Diploma

GPA (Weighted) — 4.395/4.0

## PROJECTS

### Covid Cleaner - EGHI/GT HACK COVID-19 (Winner)

May 2020

- Built product to anonymously track footpaths and transmission sites using cctv camera feeds
- Led ML development using CNNs and Signal Processing techniques in Tensorflow and PyTorch
- Won admittance into Create-X startup incubator, currently working on turning it into a viable product

### Make a Face — Deep Learning Hackathon 2018 (1st Place)

Sept. 2018

- Made a web app with 2 other teammates where the goal is for the user to match the given image's facial expression
- Detected faces, emotion, and facial reference points with CNNs and Haar Cascades
- Personally implemented facial-point-detection CNN and corresponding facial similarity algorithm

## SKILLS

**LANGUAGES:** Python, Java, HTML/CSS/JS, Typescript, Matlab, GoLang, C, Dart, R

**FRONTEND FRAMEWORKS & TOOLS:** React, Android, React-Native, Flutter, AngularJS

**BACKEND FRAMEWORKS & TOOLS:** NodeJS, Flask, LoopBack, SQL/PostgreSQL, GraphQL, Firebase, AWS, GCP

**DATA SCIENCE/ML:** Numpy, Pandas, SciPy, NLTK, Tensorflow, Keras, PyTorch

## EMPLOYMENT

### The Home Depot

#### Software Engineer Intern - OrangeWorks

Atlanta, GA · Feb. 2020 to May 2020

- Created new NLP and Object Recognition-based recommender system
- Worked with Search team to identify issues with current DIY and "How-to" query results
- Showed demonstrable improvement over existing architecture for 100% of the 15 user tests
- Technologies used include Tensorflow, PyTorch, Keras, spaCy, gensim, Flask, and React

### Software Engineer Intern - Emergency Visualization

Atlanta, GA · June 2020 to Current

- Hired to improve data visibility on emergency Purchase Orders for 2,290 stores
- Reorganized and consolidated data tables to cut time-to-action by 66%
- Designed new shipment tracking tool's front-end with a clarity and accessibility focus
- Implemented cloud-hosted ML models for improved ETAs and "at-risk" PO prediction
- Used BigQuery, CloudSQL, Tensorflow, Docker, SpringBoot, and Angular

### Monotto

#### Backend/Data Science Developer

Atlanta, GA · June 2019 to Current

- Primarily tasked with updating RoboSave product now present in 5 financial institutions
- Leading development of new internal ingestion and analytics engines
- Analysed user transactions for user spending insights using ML and NLP techniques
- Backend development done with LoopBack, NodeJS, Flask, Atruego and PostgreSQL in Typescript, Python, and Go
- Data analysis done with Pandas, NLTK, Numpy and SciPy in Python

### Computational Social Science Lab

#### Undergraduate Researcher

Atlanta, GA · Oct. 2019 to Current

- Investigating public transit-related complaints on social media
- Improved on previous publications for 7% accuracy increase
- Leveraging BERT, LDA and other ML algorithms

### Automated Algorithm Design Lab

#### Undergraduate Researcher

Atlanta, GA · Jan. 2019 to May 2020

- Optimized framework-wide cache invalidation for a 213% better value on average
- Led new NLP team to add core NLP capabilities to the framework
- Directed research lab shift to working on Georgia Tech computing cluster
- Used Tensorflow, Keras, NLTK, Gensim, Word2Vec, Genetic Programming, MySQL