TRIVIKRAMA SAI P.T.

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EDUCATION

University of North Carolina at Chapel Hill, NC   Aug. 2018-Dec. 2021

Bachelor of Science in **Computer Science** (Primary Major) and **Statistics** (Secondary Major). Minor in **Mathematics**
Major GPA: 3.89; CGPA: 3.833; Dean's List: all semesters; GRE: 330 (165V/165Q/4.0AWA)

<u>Relevant Coursework</u>:
University Courses: Data Structures, Algorithms and Analysis, Machine Learning, Databases, Internet services and Protocols, Programming Language Concepts, Data analysis, Intro to Optimization, Advanced Linear Models

Additional Online Courses: Deep Learning and Neural Nets; Hyper-parameter Tuning; Structuring an ML project; Convolutional Neural Networks; Sequence Models and NLP offered by Deeplearning.ai, Stanford CS 224n-NLP

TECHNICAL SKILLS

Languages: Java, Python, R, SQL, Octave, MATLAB, C, Prolog, LISP, SML;   **Frame Works:** Pytorch, TensorFlow
OS: Windows, Linux;   **Version Controls and Other tools:** Git, GitHub, Tableau

RESEARCH EXPERIENCE

UNC Department of Computer Science|Undergraduate Research Assistant   Oct. 2019-Present

- Study how **plagiarism detection** and code analysis can be applied to programming assignments to **help reduce the manual effort** required to grade coding assignments
- Collaborate to build an **educational machine learning software** that aids students with assignments by **detecting similarities in error messages and chunks of code and resolving the errors based on similar past data**. This would **save a large amount of time by enabling faster debugging** for the students, Professors and Teaching Assistants.

PROJECTS

Melanoma Detection|Final Project for Machine Learning course   May 2020

- Conducted a survey on the performance of **Convolutional Neural Networks (CNNs)** and **SVMs** on the task of detecting malignant melanoma from images of moles using **pytorch and sklearn**.
- The **deep learning** model out-performed the SVM and achieved an accuracy of **86.52%**

Synonym Clusterer for the GRE|Personal Project   Jun. 2020

- Developed a **Synonym Clusterer** using **spacy's** pre-trained **GLOVE** word-vectors to help me memorize words for the GRE exam. As a result of the model, **840 words** were learned in under **12 days**

Date Translator|Personal Project   Jul. 2019

- Built a **Neural Machine Translator** using the **attention model** to translate human readable dates to machine readable dates (YYYY-MM-DD) which can help reduce the amount of manual effort required for data processing

Jazz Music Generator|Personal Project   May 2019

- Created a **Jazz Music Generator** using LSTM layers and a sampling/inference model on Keras which resulted in a **30 second** audio clip of a **unique machine generated** jazz beat

Face Verification System using a Siamese network|Personal Project   Jun. 2019

- Used **transfer learning** to train a **CNN** on the task of **face verification and recognition,** which has applications in enhancing security in a variety of fields

WORK EXPERIENCE

Qikpod|Android App Development Intern|Bangalore,India   Jul.-Sep. 2017

- Created an **Android Application** that simulates the interface for smart lockers that are used for secure deliveries of e-commerce packages
- Developed a virtual interface, using **XML** and **Android studio (Java)**, to enhance the security of smart lockers through digital verification of passcodes to minimize manual labor required for management of locker spaces.

CAMPUS INVOLEMENT

CADS- Carolina Analytics and Data Science, Active Member   Aug. 2018-Present

Carolina Data Challenge: Sept. 2018 & Oct. 2019

- **Hackathon 1:** Used **Python** and **Tableau** to analyze leading causes of death in the US by time & location
- **Hackathon 2:** Used **Python's folium** to plot geo-data and implemented a **K-means clustering algorithm** to find clusters of crime locations in and around the UNC campus at Chapel Hill. Discovered that more crimes were committed near residential areas and explained the increase in the rate of crimes from 2010-2016 by analyzing the residential areas and explained the increase in the rate of crimes from 2010-2016 by analyzing the rising income inequality among residents of Chapel Hill