# ARJUN BHALLA

@ ab2383@cornell.edu  +1 (607) 697-3580  Ithaca, NY  www.arjunbhalla.com
linkedin.com/in/ab-98  github.com/ArjunBhalla98

## EXPERIENCE

**Cornell University** **Fall 2019**
**CS 4700 Head TA (Artificial Intelligence)**
Led an effort to reform the class by tuning the curriculum, liaising with professor and designing and building homework assignments for of over 200 students and 30 TAs.

**Zocdoc** **Summer 2019**
**Software Engineering Intern**
Rebuilt and conducted an audit of the core doctor availability API endpoint, business logic, and data from monolithic codebase in AWS in order to significantly decrease load times and increase developer productivity.

**Cornell University** **Spring 2019 – Present**
**Undergraduate Research Assistant**
Built baseline tests and adapted datasets for and collaborated on improving the counterfactual deep learning framework BanditNet for the project "Policy learning via unbiased regression imputation", which was accepted at an ICML workshop as a part of Professor Thorsten Joachim's lab.

**NTT Data, Inc** **Summer 2018**
**Software Engineering/Security Intern**
Spearheaded an effort to automate and integrate various disparate security systems into a streamlined platform to efficiently detect vulnerabilities in a global network of over 50,000 endpoints, saving half an FTE of labor annually.

Automated feeds for a daily security operations report, interfacing with RESTful APIs, standardizing / streamlining metrics used to measure efficacy of InfoSec programming, saving 1.5 man-hours daily.

## INDEPENDENT PROJECTS

**Neural models for abstractive headline generation** **Spring 2019**
Lead a team to research how dropout affects model accuracy for abstractive headline generation. Engineered a data pipeline, implemented, and tested a 4-layer LSTM architecture with varying dropout.

**Comparacter** **Spring 2018**
Created a movie/character recommendation system focused on text-based character attributes. Built the character similarity metrics using NLP, specifically implementing Jaccard similarity between characters based on tags generated by sentiment analysis. Data pre-processing using Empath, NumPy, SKLearn.

**Chess AI** **Spring 2018**
Designed an AI to play Chess at ~1800 ELO. Implemented Machine Learning methods to improve the state-space search engine using temporal difference learning with epsilon-greedy policies. Completed in Python, using the UCI protocol.

**Fire & Shadow** **Fall 2017 – Spring 2018**
Built a game from the ground up using Python. Developed both basic and advanced game mechanics ranging from movement and simple board interaction to implementing a dynamic HuD, and part of enemy AI with respect to pathing.

## EDUCATION

**Cornell University**
B.A. Computer Science

GPA: 3.42
Tanner Dean's Scholar
Minor in Mathematics

## SKILLS

**Programming Languages**
Python, Java, C, C, Javascript, OCaml, Scala, HTML5, CSS3, SQL, MIPS Assembly
**Frameworks & Packages**
AWS: Lambda, S3, Cloudformation, Kinesis. Django, NumPy, React.js, Tensorflow, PyTorch
**Other**
TeamCity, Git, Bash, LaTeX, Mathematica, Logisim
**Spoken Languages**
English, Hindi, Spanish, Mandarin (Conversational)

## COURSEWORK

**Computer Science:**
Data Structures & OOP • Algorithm Design • Functional Programming • Operating Systems • Machine Learning • Advanced Artificial Intelligence

**Mathematics:**
Number Theory • Linear Algebra • Probability

## CAMPUS INVOLVEMENT

**Delta Tau Delta** **Spring 2019 – Present**
**President**
Lead a team of 10 officers to plan events, coordinate logistics, and manage a budget of over $400,000.

Regularly engage in fundraising and philanthropy with alumni, as well as negotiate for improvements to the undergraduate experience.

**Cornell Hacking Club** **Fall 2017 – Present**
**Treasurer**
Organise and allocate funding from the university and sponsors such as Google, Facebook, and Microsoft.

Team placed 6/1571 at NullCon HackIM, 83/2626 at GoogleCTF.

Solved challenges in the areas of Web Security, Binary reversing, and Steganography.

**Order of Omega** **Spring 2019 – Present**
**Member**
Conduct philanthropy, networking, and academic events as a part of a leadership honours society.