

# Tanveer Mittal

MACHINE LEARNING ENTHUSIAST & DATA SCIENCE STUDENT WITH 2 YEARS OF WORK EXPERIENCE

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## Education

### University of California: San Diego

La Jolla, CA

BACHELOR OF SCIENCE IN DATA SCIENCE, PROVOST HONORS, GPA: 3.6/4.0,

Sep. 2018 - May 2022

- **Notable Coursework:** Natural Language Processing, Deep Learning, Recommendation Systems, Machine Learning, Databases, Data Science
- Volunteered as data science student panelist to speak to incoming data science students and answer questions for Triton Day

### Coursera

- **Deep Learning Specialization:** Deep Learning, Optimization, Structuring ML Projects, Convolutional Neural Networks, and Sequence Models
- **Tensorflow in Practice Specialization:** Intro to Tensorflow, Time Series Analysis, Natural Language Processing, and Computer Vision

## Skills

**Languages** Python, Javascript, SQL, Java, Matlab

**Frameworks** Keras, Tensorflow, Pytorch, ReactJS, NodeJS, Docker, SpaCy, OpenCV, Spring

**Cloud Services** Amazon Web Services(AWS), AWS Sagemaker, AWS Lambda, AWS ECS, AWS EC2, DynamoDB, Kubernetes, Spark, Dask

## Experience

### Amazon, Project Santos

Seattle, WA

SOFTWARE DEVELOPMENT ENGINEERING INTERN

June 2021 - Present

- Building a content moderation service with SageMaker, Lambda, and API Gateway to improve customer, merchant, and developer experiences
- Collaborating to create a react app integrating my content moderation service and ECS services to facilitate customer-merchant interaction

### American Express

Phoenix, AZ

SOFTWARE ENGINEERING INTERN

July 2020 - Aug. 2020

- Orchestrated Kubernetes clusters to deploy containerized Couchbase, MongoDB, and PostgreSQL databases and a Jenkins CI/CD pipeline
- Engineered an internal tool to migrate data from MongoDB to Postgres; deployed my tool to Kubernetes to mitigate significant licensing costs

### Cardiac Mechanics Research Group

La Jolla, CA

SOFTWARE ENGINEER

Nov. 2019 - Present

- Developed a full stack database application with React, Java, and SQL that stores and presents patients' clinical data and MRI images
- Updating legacy MATLAB code that mathematically transforms Cardiac Imaging meshes between coordinate systems by porting it to Python

### Data Science Student Society @ UCSD

La Jolla, CA

DIRECTOR OF WORKSHOPS

May 2019 - Present

- Collaborating with companies and other student organizations to organize machine learning workshops for the UCSD data science community
- Planning and facilitating logistics for data-science focused educational, professional, and competitive events throughout the school year

### The InfoPost

La Jolla, CA

MACHINE LEARNING ENGINEER

Feb. 2020 - May 2020

- Quantified political bias in news articles using named entity recognition, sentiment analysis, and coreference resolution ML models
- Developed a Facebook Messenger chat bot to verify COVID-19 claims using deep learning models for textual entailment and a search engine

### iDTech Camps

Lisle, IL

MACHINE LEARNING INSTRUCTOR

June 2019 - Aug. 2019

- Taught deep learning, data science, and python programming classes to 50+ high school students using Keras, Tensorflow, and OpenAI Gym
- Managed student behavior, administered safety procedures, and planned camp logistics

### UC San Diego Health Department of Medicine

La Jolla, CA

DATA PROGRAMMER

March 2019 - June 2019

- Migrated data from central data warehouse to department's personal SQL server by writing automated T-SQL procedures
- Developed and deployed internal tools for fuzzy logic matching, data processing, and financial dashboarding to assist business analysts

## Projects

### NoteZ.ai (Honorable Mention @ SDHacks 2021)

- Integrated topic modeling and ML models for question answering and text summarizing to generate study guides from Zoom transcripts
- Collaborated to create a front-end dashboard to invoke our machine learning algorithm and present structured study guides to students

### Time Series Modeling of Airbnb Prices in San Diego

- Forecasted the average prices of Airbnb's in San Diego using SARIMAX and FB Prophet time series models
- Created an interface for users to input search criteria for an Airbnb and receive price predictions from the time series models

### Textual Analysis of Chronic Illness Surveys (1st Place Entry @ UCSD DataHacks 2020)

- Applied T-Stochastic Neighbor Embeddings, GloVe, and TF-IDF to visualize survey questions in a 2d space using Tableau dashboards
- Analyzed the effectiveness of Tobacco laws in the US for restricting underage tobacco sales by performing permutation testing

### Sequence to Sequence Question Answering System

- Utilized the Stanford Question Answering Dataset and pretrained GloVe embeddings to train models capable of answering questions
- Created RNN, LSTM, bidirectional LSTM, and multi-headed self attention deep learning models using Pytorch for automatic differentiation