

# Arya Prabhudesai

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Interests: Natural Language Processing, Deep Learning, Machine Learning, Computer Vision

## EDUCATION

### University of California San Diego

2021 - Present

Master of Science in Computer Science

CGPA: N.A.

### College of Engineering Pune, India

2016 - 2020

Bachelor of Technology in Computer Engineering (Honours)

CGPA: 9.84 / 10

- Institute Rank 1 and Branch Gold Medallist

## EXPERIENCE

### Data and AI Specialist | Signpost India Pvt Ltd, Mumbai, India

Dec 2020 - Aug 2021

- Led the AI team to develop end-to-end systems for data mining and data analytics applications. Utilised tools like **BigQuery**, **Google Data Studio**, **siren.io**, and **KNIME** to preprocess, visualise, and train machine learning models on the data. Designed supervised and unsupervised models in **Python** for **event extraction** from textual data.

### Artificial Intelligence Research Intern | Bharatrath, Pune, India

May 2020 - Dec 2020

- Built and deployed a **chatbot** to handle customer interactions and facilitate smooth order placements.

### Research Assistant | Nanyang Technological University, Singapore

May 2019 - Jul 2019

- Surveyed the latest advancements in **Automatic Text Scoring Systems** and developed own model using a novel hybrid Siamese Bi-LSTM network. Published the research and the results at **IEEE TALE 2019**

### Deep Learning Research Intern | Mobiliya Technologies, Pune, India

May 2018 - Jul 2018

- Studied and reviewed libraries like **SpaCy** for creation of language models. Implemented **Natural Language Processing** models and libraries for Indian regional languages. Presented and published a research paper at the **Springer IBICA-WICT 2018**

## SELECTED PROJECTS

### Face Liveness Detection Against 2D Spoofing Attacks using Deep Learning

Aug 2019 - Oct 2020

- Created a novel 2D spoofing attack dataset of 1440 pictures which incorporated 5 spoofing attacks. Trained hybrid multi-stream **Convolutional Neural Network** models in **Keras** on our dataset. Attained very low error rates (close to 0.0) when tested on a publicly available dataset.

### Automatic Short Answer Scoring

May 2019 - Jul 2019

- Implemented a hybrid **Siamese Bidirectional-Long Short Term Memory** network with incorporation of feature engineering for the ASAG task. Achieved a Pearson correlation coefficient of 0.655 on the Mohler dataset.

### Chatbot for College of Engineering Pune Website

Aug 2018 - May 2019

- Collaborated to implement a chatbot application for the COEP website to respond to queries about the campus. Used tools such as **Stardog** for data warehousing, and **Recurrent Neural Networks** for training the model

### Document Ranking System for Hindi Language using Deep Learning

May 2018 - July 2018

- Generated Hindi language **word embeddings** using a Deep Learning based Negative Sampling Architecture in **Python** and created a ranking system for Hindi documents using a weighted tf-idf scheme. Investigated the performance of the system using **t-SNE visualisations**.

## ADDITIONAL SKILLS

**Languages:** Python, C, C++, Java, SQL

**Libraries and Platforms:** TensorFlow, pandas, NumPy, SciPy, Matplotlib, PyTorch, Caffe, NVIDIA DIGITS

**Selected Coursework:** Artificial Intelligence, Natural Language Processing, Data Science, Computer Vision

**Certifications:** Deep Learning A-Z : Hands-On Artificial Neural Networks - Udemy

## ADDITIONAL INFORMATION

- Organised and conducted a seminar on "International Research Internships" for students at COEP 2019
- Class Rank 1 and Best Outgoing Student, Marathwada Mitramandal's Junior College of Science 2016
- Class Rank 1, Vidya Valley School Pune 2014
- Selected among 30 students from Pune for the **Infosys** Catch Them Young training program 2012