

ABEEN BHATTACHARYA

An Undergraduate Junior at **IIT-Bombay**

Email — **GitHub** — **Website**

WORK EXPERIENCE

Intern — Data Science Team
Kalpataru Group

May 2019 - June 2019
NLP & Deep Learning

- Built a machine learning model, using TensorFlow for the purpose of Employee Attrition Analysis, designed a **Recurrent Neural Network [RNN]** model with a **Long Short-Term Memory [LSTM]** unit for **Sentiment Analysis** of employee reviews to include it as a feature, and used **Random Forests** for **Feature Selection** from the datapoints collected for training the model
- Developed a **Conversational Chatbot** using **Natural Language Processing & Deep Learning**, identified **intents**, **entities** & **dialogs** for the use cases & **trained** the bot using the same and implemented many of the **300+** use cases of the bot, using **Microsoft Azure** for development

Intern — Development Team
GTarang Energy Solutions

September 2018 - January 2019
Web Development

- A Start-up with a aim of providing technologically optimised and accessible clean energy solutions
- **Developed** the entire website with the use of **Django**, a web framework written in **Python** and its multiple packages along with a nice blend of **HTML**, **CSS** and **Javascript** using **Bootstrap**
- Learnt the importance of writing **clean** and easily **re-usable** code throughout the entire internship
- **Coordinated** directly with the co-founders to ensure a **better** and more accurate **user-experience**

TECHNICAL PROJECTS

Reading Comprehension for Open-Domain Question-Answering
Neural Networks and Deep Learning

July 2019
Celebal Technologies

- Built a **Neural Network**, which can answer questions pertaining to a given comprehension of text
- Explored various Neural Networks and pre-existing models like **DrQA**, **BERT**, **BiDAF** & **XLNet**
- Implemented Google Brain's **QANet**: Combining Local Convolution with Global Self-Attention for Reading Comprehension in **TensorFlow** and developed a **real-time demo** for it using React
- Obtained an EM Score of **70.4** and a F1 Score of **79.6** on the Stanford Question Answering Dataset

Mood Indigo Website and Native Application
Development

July 2018 - December 2018
Mood Indigo, IIT Bombay

- Built the frontend of the website using **ReactJS** which also includes **HTML**, **CSS** and **Javascript**
- **Developed** and **designed** an **entire** website: **Mood Indigo Blogs** using **Django** single-handedly
- Added **multiple animations** to the website using **Jquery** for a better and exciting user experience
- Created a **Native Application** using **React-Native** which had **5000+** downloads after release

Inter-IIT Tech Website
Web Development

September 2018 - December 2018
Institute Technical Council, IIT Bombay

- Co-ordinated within a **3-member** team responsible for the website of the Inter-IIT Tech Meet 2018
- Developed the website using **Jekyll** and the combination of **HTML**, **CSS** and **Javascript**
- All the code was **reviewed** multiple times and **perfected** before being pushed to production

Other Technical Projects include a Chain Reaction Game (CS101 Course Project), a Data Analysis & Interpretation Project (MM217 Course Project), a Walking Stick for Blind Men (NSS Course Project), and a Material Study: Disassembly of a Dash Charger (MM152 Course Project) amongst many more

SCHOLASTIC ACHIEVEMENTS

- Ranked amongst top **0.6%** out of 1.5 million candidates in the JEE Mains Exam held in 2017
- Ranked in the **99th percentile** out of 2,20,000 candidates in the JEE Advanced Exam of 2017
- Scored **800/800** in SAT Subject Test: **Mathematics Level 2**, **780/800** in SAT Subject Test: **Physics** and **790/800** in SAT: **Mathematics** and in the **99th Percentile** in all the three tests

POSITION OF RESPONSIBILITY

Manager

Web and Coding Club, IIT Bombay

April 2019 - Present

Institute Technical Council

- **Lead** a team of **20** sophomores, part of one of the **biggest college technical clubs** in India, to cultivate and sustain a hobbyistic **programming culture** and conduct activities in the institute
- **Developed** a Web and Coding Blogs Website **singlehandedly** to connect aspiring students with the experiences of successful developers and help them learn from the mistakes that they made
- Guided **100+** students in making their first app using **Scratch** and conducted the **Git/GitHub**, **Machine-Learning** and **Android** workshops to introduce students to the basics of programming
- One of the Founding Members of the **DevCom** - Developers' Community to guide students who are getting started with Open Source Development and to inculcate great coding habits within them
- **Conducting** events of **GSoC Incubation Cell** to ensure more students participation in GSoC'19
- Maintaining and updating WnCC's **Website**, **Wiki**, **Internship Portal** and the **InstiApp** amongst other resources regularly and keeping it up-to-date for a better and vivid experience for the user

Web and Design Secretary

Department of Metallurgical Engineering and Materials Science

July 2018 - April 2019

IIT Bombay

- **Coordinating** with a team of 14 students responsible for all the **proceedings** of the Department
- Responsible for **maintaining** the Department **Website** and updating the website regularly
- **Creating** and **managing online elections** for all posts in the department using Gymkhana portal
- **Designing** the posters for every event, and the design of the department hoodies and tshirts

MISCELLANEOUS

- **Mentored 150+** students at Codecamp, a **Python, HTML5 & PHP** hackathon conducted by CodePrompt in collaboration with Web and Coding Club, IIT Bombay for students across Mumbai
- **Line follower & Maze runner bot**: Built a micro controller processed autonomous bot which follows a line on a surface and solves a maze using infrared and ultrasonic sensor, based on Arduino
- **XLR8 2017** : Constructed a robotic car for a racing competition using Arduino Uno for its functioning, L293D motor driver for control and a HC-05 bluetooth module for wireless communication
- **Guided** a group of 4 students for building their remote controlled bot successfully in **XLR8 2018**
- **Shot and edited** a Music Video Entry for Arcade Competition '17 which bagged the **5th position**
- **Designed** the **Logos**, **T-shirts** and **Hoodies** for the Institute Technical Council of IIT Bombay

TECHNICAL SKILLS

Programming: Python, C/C++, Java, MATLAB, GNU Octave, Bash, HTML & CSS

Libraries : PyTorch, Keras, Tensorflow 2.0, OpenCV, ReactJS, Scipy, Seaborn & Numpy

Softwares : Vim, Git, GitHub, Anaconda, L^AT_EX, Jupyter, Origin, AutoCAD & SolidWorks

Miscellaneous: Adobe Premiere Pro, Final Cut Pro X, Adobe After Effects, Adobe Illustrator
Adobe Photoshop & MS-Office