

# Shantanu Acharya

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## EDUCATION

### NIT MIZORAM

#### B.TECH IN COMPUTER SCIENCE AND ENGINEERING

Grad. July 2019 | Aizawl, India  
CGPA: 9.69/10.0  
Gold Medalist

### SPRING DALE COLLEGE

#### HIGHER SECONDARY EXAMINATION

Grad. May 2014 | Indira Nagar, Lucknow, India  
Grade: 91.80%

### SPRING DALE COLLEGE

#### HIGH SCHOOL

Grad. May 2012 | Indira Nagar, Lucknow, India  
Grade: 91.40%

## LINKS

Github: [shan18](https://github.com/shan18)  
LinkedIn: [shanacharya](https://www.linkedin.com/in/shanacharya)

## SKILLS

### PROGRAMMING LANGUAGES

Python, C, Java, C++, Javascript, Bash,  $\text{\LaTeX}$  MySQL, Markdown

### TOOLS/Frameworks

Tensorflow, Keras, Django, ReactJS, Redux, jQuery, git, Amazon Web Services, Heroku, Google Cloud

## MOOCS

### DEEP LEARNING SPECIALIZATION

Coursera | [deeplearning.ai](https://www.coursera.org/deeplearning) | 2018  
5 course specialization. Topics: Neural Networks and Deep Learning, Improving Deep Neural Networks, Structuring Machine Learning Projects, Convolutional Neural Networks, Sequence Models  
Grade: 100% on all 5 courses

### INTRODUCTION TO MACHINE LEARNING

Coursera | Prof. Andrew Ng, Stanford University | 2016  
Grade: 96.9%

## PUBLICATIONS

### TOPIC-BASED IMAGE CAPTION GENERATION

ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING (AJSE) | [PAPER](#)  
15th November 2019

- Authors: Sandeep Kumar Dash, Shantanu Acharya, Partha Pakray, Ranjita Das and Alexander Gelbukh

### EVERY CHILD SHOULD HAVE PARENTS: A TAXONOMY REFINEMENT ALGORITHM BASED ON HYPERBOLIC TERM EMBEDDINGS

ASSOCIATION FOR COMPUTATIONAL LINGUISTICS (ACL) | [PAPER](#)  
5th June 2019

- Authors: Rami Aly, Shantanu Acharya, Alexander Ossa, Arne Köhn, Chris Biemann and Alexander Panchenko

## EXPERIENCE

### SIMBO.AI | ARTIFICIAL GENERAL INTELLIGENCE SOFTWARE ENGINEER

June 2019 – Present | Bengaluru, India

- Worked on a variety of domains including Deep Learning, Full Stack Development, Database Management and Linux Server Management.
- Handled several projects where the responsibility of the complete end-to-end project pipeline was given.

### UNIVERSITÄT HAMBURG | RESEARCH INTERN | [GITHUB](#)

June 2018 – August, 2018 | Hamburg, Germany

- Created a model to improve an existing taxonomy using distributional semantics.
- Devised a clustering mechanism to cluster nodes in the taxonomy using similarity scores calculated with the help of different word embeddings.
- The model achieved state-of-the-art results on the SemEval-2016 Task13 for the English language with significant improvements over previous methods.
- Tools:** Python

### IIT BOMBAY | ENGINEERING INTERN | [GITHUB](#)

June 2017 – July 2017 | Mumbai, India

- Developed a virtual simulation for the Single Board Heating System (SBHS).
- Integrated an online quiz taking interface called yaksh.
- Implemented a centralized database in order to prevent data inconsistency.
- Tools:** Python, Django, Scilab, Apache.

## PROJECTS

### TOPIC BASED IMAGE CAPTIONING | DEEP LEARNING | [GITHUB](#)

Oct 2018 – May 2019

- Developed a model which uses Latent Dirichlet Allocation (LDA) to extract topics from the image captions.
- Developed a deep learning based caption generation model using LSTMs.
- Applied the concept of transfer learning to extract image features.
- Tools:** Python, Tensorflow-Keras, NLTK, OpenCV-Python, MSCOCO-2017 Dataset.
- Services:** Google Cloud.

## ACHIEVEMENTS

### SCHOLASTIC

#### GOLD MEDALIST - NIT MIZORAM

Graduated as the Gold Medalist. Got awarded with two gold medals for:

- Overall highest academic performance.
- Highest academic performance in branch Computer Science and Engineering.

#### DAAD-WISE SCHOLARSHIP

Selected for Summer Research Internship at Germany in 2018

#### MITACS SCHOLARSHIP

Selected for Summer Research Internship at Canada in 2018

#### 10/10 GRADE

During 5th, 7th and 8th Semester at NIT Mizoram

### EXTRA-CURRICULAR

#### SECRETARY

2019

At Morphosis, the annual technical fest of NIT Mizoram

#### SCHOOL CAPTAIN

2013

Head of the Student Council at Spring Dale College

#### BASKETBALL TOURNAMENT

#### WINNERS

2013

Zonal Basketball Championship Tournament at Lucknow, U.P.

## PROJECTS (CONTINUED.)

### STOCK BRIDGE | STOCK MARKET SIMULATOR | [GITHUB](#) | [WEBSITE](#)

Apr 2018

- Built the entire user-company transaction system from scratch.
- Developed a scheduler mechanism for automating user transactions.
- Developed a Bank Model to issue loans and deduct interests from users.
- Extensive usage of django signals, model managers and custom querysets.
- **Tools:** Python, Django, Django REST Framework, chart.js, Bootstrap v4.
- **Services:** Heroku, sendgrid.

### CODE WARRIOR | ONLINE JUDGE PLATFORM | [GITHUB](#) | [WEBSITE](#)

Feb 2018 – Mar 2018

- Built the entire compilation, execution and submission evaluation module from scratch.
- Designed the platform to support languages: C, C++, and Python.
- Constructed a tiebreaker mechanism which uses user submission execution time for ranking users with the same score in the leaderboard.
- **Tools:** Python, Django, Bootstrap v4.
- **Services:** Amazon Web Services, PythonAnywhere, sendgrid.

### KART | E-COMMERCE WEBSITE | [GITHUB](#) | [WEBSITE](#)

Dec 2017 – Jan 2018

- Built the backend on entirely on Django. Utilized jQuery to introduce asynchronicity to the website.
- Devised the functionality to sell digital items by storing data in AWS S3 Storage.
- Rendered the order summary as a PDF and send it to user after a successful transaction.
- **Tools:** Python, Django, Bootstrap v4, jQuery, Ajax, chart.js, jsrender.
- **Services:** stripe, mailchimp, Amazon Web Services, heroku, sendgrid.

### AUTORANKING AMAZON REVIEWS | MACHINE LEARNING | NATURAL LANGUAGE PROCESSING | [GITHUB](#)

Oct 2017

- Ranking reviews on Amazon according to their helpfulness score.
- The problem was modeled as a regression problem. The performance was evaluated by using the coefficient of determination and rank correlation.
- Predictions were made based on various categories of features of the review text, and other metadata associated with the review, with the purpose of generating a rank for a given list of reviews.
- **Tools:** Python, Numpy, Pandas, textblob, scikit-learn.

### MORPHOSIS | ANDROID | [GITHUB](#) | [GOOGLE PLAY STORE](#)

Mar 2017 – Apr 2017 | Aizawl, Mizoram

- Created the android app for the annual technical fest of NIT Mizoram.
- The app contains the information of all the events which are to be conducted during the technical fest.
- Developed a game called Scooby Dooby Doo within the app.
- **Tools:** Java, Android Studio, Firebase.