Shantanu Acharya

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AREAS OF INTEREST

Machine Learning
Deep Learning
Full Stack Development

EDUCATION

NIT MIZORAM

B.Tech in Computer Science and Engineering
Expected June 2019 | Aizawl, India
CGPA: 9.66/10.0 | Department Topper

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**
LinkedIn: **shanacharya**

SKILLS

Programming Languages

Proficient:
Python • C
Familiar:
Java, C++, Javascript, LaTeX MySQL, Markdown

Tools/Frameworks

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

CONFERENCES

SciPy India 2015

Conference on Python for Scientific Computing. FOSSEE, IIT Bombay

EXPERIENCE

UNIVERSITÄT HAMBURG | Summer 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, NetworkX.

IIT BOMBAY | Summer Intern | Github

June 2017 – July 2017 | Mumbai, India

- Improved efficiency and reliability of the Single Board Heating System (SBHS) Virtual Lab System.
- Developed a mathematical model simulation for the 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

IMAGE CAPTIONING | Deep Learning | Github

Nov 2018 - Present

- Developed a multi-label classifier which identifies all the object categories present in an image in the MSCOCO 2017 dataset.
- Applied the concept of transfer learning on a pre-trained VGG19 Net to create the multi-label classifier.
- Developed the caption generator model using a merge model architecture.
- Generated the captions during inference using Beam Search.
- **Tools:** Python, Tensoflow, Numpy, OpenCV.
- **Services:** Google Cloud.

STOCK BRIDGE | Stock Market Simulator | Github | Website

Apr 2018

- Built the entire user-company transaction system from scratch.
- Developed an automated system for fluctuating stock prices.
- Devised a tiebreaker mechanism using the concept of coefficient of variation.
- Extensive usage of django signals, model managers and custom querysets.
- **Tools:** Python, Django, Django REST Framework, chart.js, Bootstrap v4.
- **Services:** Amazon Web 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, sendgrid.

ACHIEVEMENTS

SCHOLASTIC

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 Semester at NIT Mizoram

TOEFL
Secured 102 marks out of 120

EXTRA-CURRICULAR

Joint Secretary
2018
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.)

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.

COURSEWORK

UNDERGRADUATE
Algorithms & Data Structures, Operating Systems, Database Management System, Computer Networks, Discrete Mathematics, Computer Graphics, Numerical Methods and Probability Theory, Computer Organization and Architecture, Theory of Computation, System Programming, Linear Algebra

ONLINE/MOOC

• Deep Learning Specialization
Coursera | deeplearning.ai | 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%