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

PUBLICATIONS

EVERY CHILD SHOULD HAVE PARENTS: A TAXONOMY REFINEMENT ALGORITHM BASED ON HYPERBOLIC TERM EMBEDDINGS | Association for Computational Linguistics (ACL) 2019 | Paper

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

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

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 caption generation model using LSTMs which takes the image features from a pre-trained InceptionV3 network and the topics from the LDA-model as input.
- Made the caption generation model using merge model architecture.
- **Tools:** Python, Tensoflow-Keras, NLTK, OpenCV-Python, MSCOCO-2017 Dataset.
- **Services:** Google Cloud.

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.

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

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.)

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.

MASSIVE OPEN ONLINE COURSES

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%