

# HIMADRI MISHRA

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## EDUCATION

**IIT(BHU), Varanasi, India** • IDD, Bachelor and Master of Technology in Computer Science and Engg., 2018  
Cumulative GPA: 9.28/10.00

**Relevant Coursework** Artificial Intelligence · Natural Language Processing · Data Structures · Theory of Computation · Computer Networks · Operating Systems · Algorithms · Information Security · Network Security · Machine Vision

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## SKILLS

**Programming Languages** Python · C++ · C · C# · JavaScript

**Frameworks** Tensorflow · Theano · Keras · Microsoft Bot Framework · Django · Git · LaTeX · Mujoco · SK-Learn

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## EXPERIENCE

**University of California, Berkeley** (Berkeley, CA)  
Undergraduate Research Internship under Prof. Dawn Song (Summer 2017)

- Targeted the problem of using Neural Programmer Interpreter for robotics task, developing on top of the concept of recursion in Neural Programmer Interpreter.
- Tackled the block stacking problem using a deterministic environment, defining high level primitive actions.
- Developed the block stacking environment for Fetch robot using a physics engine, Mujoco.
- Designed the stacking problem so as to generalize across a varying initial state, configuration and across different number of blocks.

**Microsoft India (R&D)** (Hyderabad, India)  
Software Developer Intern (Summer 2016)

- Designed and developed a context sensitive chatbot for serving custom queries seeking information.
- Designed a Web Application for chatbot with custom front-end for integration in native Windows app, thus increasing the potential reach of the chatbot.
- Published the bot on Skype and Telegram besides the custom Web Application.

**IIT(BHU), Varanasi** (Varanasi, India)  
Teaching Assistant (2015 - current)

- Served as a TA for various courses taught viz Introduction to Computer Programming, Artificial Intelligence, Database Management System. Currently serving as TA for Network security course.
- Instructed students lab each week by designing Lab programming experiments, leading discussion, demonstrating procedures and grading students lab report.
- Provided Individual support to students inside and outside the lab for all three of above courses.

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## PROJECTS

**One-Shot Learning using Memory-Augmented Neural Network** (IIT(BHU), Varanasi)  
Prof. K.K.Shukla (Dec 2016-Jan 2017)

- Performed experiments for few-shots classification on Omniglot dataset using Memory-Augmented Neural Networks and explored the possibility to extend the concept to generic datasets.
- Implemented novel Memory-Augmented Neural Network library in Tensorflow and made available publicly on Github.

**Botnet Detection in Computer Networks using Machine Learning** (IIT(BHU), Varanasi)  
Prof. K.K.Shukla (Jul 2016-Nov 2016)

- Implemented a scalable flow generator based above SFrames, available online on github.
- Extracted useful Network flow based features from the raw Packet capture files and also created additional ones based on network domain knowledge.
- Trained state of the art models, Feed forward Neural Networks and Ensembles and reported the best model performing best on test set.

**Movie Retrieval System** (IIT(BHU), Varanasi)  
Prof. K.K.Shukla (Jan 2016-Apr 2016)

- Built a movie retrieval system using IMDB dataset and Bing Search query for the month of Dec 2015.
- First step was to assign the search queries a relevance score for each corresponding possible result, which was done using the help of 15 people.
- Developed a two step pipeline involving Top-20 retrieval from the Index and finally Re-Ranking them to get the final results.

## ACHIEVEMENTS AND RECOGNITION

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- [SN Bose Scholar Program](#) Awardee, 2017
- Top 8% in world in Kaggle Allstate Claims Severity contest 2017, securing 242 rank out of 3055 participants.
- Honorary mention in ACM ICPC Amritapuri '17 Asia regional round.
- Honorable Mention in HP Think-A-Thon 2016.
- Stood out as the topper among all Integrated Dual Degree course students in freshman year and thus switched major from Civil Engineering to Computer Science and Engineering.
- Currently Ranked 2 in the Department.

## MISCELLANEOUS

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- Built a Deep Learning based Emotion Detection System.
- Designed and developed a temperature controlled automatic exhaust fan.
- Built a Quad-rotor from scratch in freshman year.
- Developed a parallel image erosion and normalization system using MPI.

## POSITION OF RESPONSIBILITIES

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- Coordinator, A-Maze-D, autonomous grid solver robot event, Technex'16, the annual techno-management fest of IIT(BHU).
- Coordinator, Perplexed, constrained programming event, Codefest'16, the annual fest of Department of Computer Science and Engg., IIT(BHU)
- Co-Coordinator, GridXplorer, Autonomous grid solver robot event, Technex'15, the annual techno-management fest of IIT(BHU).
- Co-Coordinator of Publicity, Spardha'15, the annual sports festival of IIT(BHU).
- Panel member, Robotics Club, IIT(BHU) for the period 2015-16.
- Member, Club of Programmers (COPS), IIT(BHU).