Manikanta Reddy D

Computer Science Graduate, Georgia Tech

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Education

- MS, Computer Science, Georgia Institute of Technology, Atlanta, Graduation: May 2019, Magna Cum Laude, 3.8/4
- B.Tech, Computer Science, Indian Institute of Technology, Kanpur, Graduation: Jun 2017, 3.4/4

Work Experience

Georgia Tech, IARPA-MOSAIC: Project Tesserae
2018 (Current)

Graduate Researcher (HCI)

- Working on analyzing employee stress relationships in their workplaces using machine learning tools.
- Working on imputation of missing social media features by learning behaviors from other sensors streams like bluetooth devices, wearables, etc.
- 2 submissions under review in IMWUT (Ubicomp); 1 accepted submission to ACM-CHI 2019.

Microsoft, Core Services Engineering
2017-2018

Software Development Engineer

- Worked for Core Services Engineering (CSE) with the Customer Account Life Cycle (CALC) tool, that serves the Sales Excellence Personnel of Microsoft and ensures they generate revenue as quickly as possible.
- Designed(Initiation to Shipping) and built a highly scalable API that brought down a business process from **2 weeks to 5 days** with 0.1% inconsistencies churning more than **25 million requests** during the said period.

Microsoft, Internal Tools
2016

Software Development Intern

- Worked at Microsoft Internal Tools and built an intelligent chatbot to empower sales personnel to do their work on the go, decreasing the information delay and actively increasing their productivity.

Volunteer

Full Stack Developer
2018

Hyderabad Center for Human Welfare (HCHW)

- Built a Secure Cloud driven platform based on .NET, SQL & Angular stack for mobile clinics to sync sensitive patient data and for inventory management.
- HCHW is an NGO driving mobile clinics, that provide medical facilities by taking the clinics to the masses.

Hackathons

DigiPrint
June 2018

Whack-A-Thon, Microsoft

- An AI-powered extension that helps readers to better analyze their reading and plan their writing through sentiment analysis
- Placed **second** among all of Microsoft India Hires.

DeepInsight
May-Aug 2016

Code.Fun.Do, Microsoft

- Built a Microsoft Office Add-In to assist users in their text writing tasks. It uses Machine learning APIs to ease the routine tasks of researching and make them more interesting.
- The AddIn received **critical acclaim** on the Finalist Forum of Code.Fun.Do.
- It has been awarded the **Top Design Idea** and **Top Coding Team** and stood as **Overall Winner**.

Share Journey
Oct 2015

Google Dev Fest

- Built a comprehensive portal on NodeJS, Express Framework with an AngularJS front end to provide for easy sharing of taxi rides between students of the institute
- Placed **1st** in the Google Developer Group Hackathon.

Academic Courses

Georgia Tech	Reinforcement Learning, AI for Robotics, Data Visual and Analytics, Machine Learning for Trading
IIT Kanpur	Machine Learning Techniques, ArtiFicial Intelligence Programming, Computer Vision, Software Engineering, Data Base Systems, Computer Networks, Computer Security, Computer Architecture, Operating Systems, Compilers, Data Structures and Algorithms

Skills

Languages	Python, C#, C, T-SQL, Javascript, Typescript
Technologies	Azure, SQL, .NET, Django, Postgres, NodeJS, Angular

Scholastic Achievements

- *2013* Secured **AIR 121** in **IIT JEE** an entrance exam given by over 150,000 aspirants.
- *2011* Awarded **Gold Medal** in IGNOU-UNESCO Science Olympiad
- *2015* Awarded **Gold Medal** and placed 1st in the 3rd Inter IIT Tech Meet held in IIT-KGP
- *2012* Placed **37th** in the KVPY Merit list and received a Monetary Scholarship from IISc
- *2013* Nominated for **Aditya Birla Scholarship**, one among 40 students from all of India
- *2013* Selected in top 40 and attended Orientation Camp of International Astronomy Olympiad
- *2011* Ranked 10th in the state in the prestigious South Indian Physics Olympiad
- *2011* Selected in top 40 and attended the Orientation Camp of International Junior Science Olympiad

Academic Projects

A Deep Q Learning Experiment: On the mechanics of Landing a module on Moon
March 2018

Reinforcement Learning, GaTech

- Built a deep neural network to train an agent to successfully land a module on moon in a simulation
- Surveyed various algorithms to solve the complex problem and benchmarked them.
- The Analysis and Paper Report was awarded **Exemplary Status** in the class of **300+ students**.

Fishy Cyber attack detection
Jan-Apr 2017

Prof. Sandeep K. Shukla, IIT Kanpur

- Developed a new approach to detect cyber attacks in Industrial systems through LSTM models
- The sequence learning LSTM based model encapsulated principles of Zone division in ICS, capable of pinpointing a breach.
- Tested the model on a simulation of an Industrial plant

On segmentation of Ultrasound Images of the Neck
Aug-Nov 2016

Prof. Harish Karnick, IIT Kanpur.

- Worked on segmenting ultrasound images to accurately identify Brachial Plexus
- Implemented a model based on Autoencoders with redesigned connections to boost high resolution features in the output
- Dream analysis revealed significant improvement in the learning over conventional autoencoders
- Proposed a faster second model based on Proposals by sliding windows
- Devised a hack based on PCA to clean the binary outputs without loss in accuracy

A Survey On Human Sex Determination Methods
Jan-Apr 2016

Machine Learning Techniques, Prof. Harish Karnick, IIT Kanpur

- Performed an extensive survey on various methods of determining Human sex using machine learning techniques
- Applied the trained models to IITK's surveillance system to test our online version of sex determination algorithms
- The Analysis and Paper Report was the graded **second best in the class of 200+ students**

Multilingual Text to Text similarity
Jan-Apr 2016

Prof. Arnab Bhattacharya, IIT Kanpur

- Devised a algorithmic pipeline to estimate semantic relatedness between multilingual articles over wikipedia without any dictionary based sub systems for translations

Dynamic Video Synopsis
Jan-Apr 2016

Prof. Vinay P. Namboodiri, IIT Kanpur

- Generated a dynamic video synopsis with a stroboscopic effect as opposed to a key frame based method by solving a minimization problem over an energy equation
- Implemented iterative graph cuts and Loopy belief propagation to optimize the minimization

On Variables In Globular Cluster NGC 2419
Dec 2015

Prof. Priya Hassan, National Initiative on Undergraduate Science(NIUS Astronomy)

- Developed automated methods for registering images of NGC2419 from Himalayan Chandra Telescope
- Implemented a Discrete Fourier Transforms based algorithm to align and stack images even with inaccurate prior WCS data
- Propsed ways to identify gravitational microlensing events in light curves for discovering potential Planets in NGC 2419.

Analyzing VHE Gamma Rays From Markarian 421 And Crab
Dec 2013

Dr. K. K Yadav and Dr. R. C. Rannot, Bhabha Atomic Research Center (BARC), Department of Atomic Energy

- Worked on Very high energy Gamma Ray Telescopy to understand phenomenon in a different spectrum of light.
- Developed methods to cleanse low resolution data from TACTIC on Crab Nebulae and MRK421, of cosmic ray events and to estimate the signal parameters and temporal distribution of VHE Gamma Rays from the sources
- Presented a possible verification of current theoretical models of VHE Gamma ray sources