Suryatej Reddy **Vyalla**

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Education

Georgia Institute of Technology *Atlanta, GA*

Master of Science in Computer Science *Aug 2021 - May 2023 (Expected)*

Indraprastha Institute of Information Technology (IIIT) Delhi *New Delhi, India*

Bachelor of Technology (B.Tech), Computer Science and Engineering (CSE) | **GPA: 9.35/10** *Aug 2016 - July 2020*

- Selected Coursework: Deep Learning, Machine Learning, Information Retrieval, Semantic Web, Reinforcement Learning, Computer Graphics

Skills

Programming Languages	Python, Java, C++, Javascript
Data Science Frameworks	PyTorch, Keras, Pandas, Sklearn
Development Tools and Technologies	Django, Android Studio, mySQL, mongoDB, Docker, Celery, Redis, OpenGL, Git, Latex

Industry

Adobe Systems *New Delhi, India*

Member of Technical Staff, Adobe Campaign R&D | **C++, Java, Javascript** *Aug 2020 - Aug 2021*

- Worked on improving recovery and error messaging of Remarketing Emails (Triggers)
- Fixed critical bugs related to Custom Resource API publication
- Delivered improvements to Push Notification delivery that reduced server load by 15% on high usage customers
- Developed an unsupervised learning based algorithm to filter logs that assists engineers during Customer Service Outages (CSO's).

Atrillu - Tech Enabled Marketing Solutions *Bengaluru, India*

Co-Founder and CTO | **Consulting, Data Science Advisory** *Aug 2020 - Aug 2021*

- Worked on various aspects of startup ranging from hiring and meeting clients to making sales pitches and product development
- Lead a team of 5 that developed **Marketing Mix Modelling** tools for leading Marketing Agencies (Schbang, DjangoDigital) in India
- Developed and deployed intelligent **(NLP based)** marketing systems for clients (Amazon Prime Video, HDFC Life Insurance)

TCS Innovation Labs *New Delhi, India*

Research Intern | **Machine Learning** *May 2019 - July 2019*

- Trained **LSTM networks** for classification and sentiment analysis on removed comments on Reddit
- Experimented with unsupervised learning algorithms **(DBSCAN, K Means, GMM)** on Reddit user profiles
- Setup a multi threaded architecture to collect deleted and removed comments from Reddit

Open Transit Data Delhi | Government of NCT, Delhi *New Delhi, India*

Data Science Intern | **Socket Programming, Data Cleansing and Structuring (Pandas)** *Sep 2018 - Nov 2018*

- This project made Delhi the **first city in India to open up transit data** to public. [Link]
- Developed algorithms to process live logs received from buses over linux sockets and cross linked with static timetable.
- Built a robust system to convert this data into General Transit Feed Specification (GTFS) which is a global standard for transit data.

MyWanderlust.in *New Delhi, India*

Software Engineer Intern | **Django, Javascript** *May 2017 - Jul 2017*

- Worked on asynchronous data collection of users from Facebook and Instagram using celery queues that brought down compute time by 35%.
- Built a web based messaging platform for users from scratch using AJAX
- Implemented like and comment feature for posts.

Academic Research

Massachusetts Institute of Technology (MIT) *Remote*

Research Assistant | Advisor: **Dr. Kiran Garimella** | **Natural Language Processing (NLP)** *July 2019 - August 2020*

- Worked on the problem of misinformation on WhatsApp during the Indian General Elections 2019
- Experimented with various language models **(Word2Vec, Doc2Vec, BERT, ELMO)** on Multilingual WhatsApp data for various tasks (coordinated messaging patterns, hate speech, fear speech)
- Built intuitive interfaces for journalists, researchers, and students to annotate WhatsApp chats recreated from data.
- Developed tools to index and search large data using Elasticsearch (ELK) stack.

Precog, IIIT Delhi *New Delhi, India*

Undergraduate Thesis | Advisor: **Dr. Ponnurangam Kumaraguru** | **Social Computing, NLP** *Jan 2018 - June 2020*

- Built a scalable system to collect multimodal data from public WhatsApp groups
- Developed an algorithm using **knowledge graphs and text embeddings** to verify the authenticity of news articles.
- Built an android application that got **featured in Times of India**. *http://bit.ly/whatsfarzi*
- Led a team of 2 researchers in an exploratory study of NaMo App.
- Studied voter privacy leaks on Twitter during the Indian Elections.

CoronaActionIndia *New Delhi, India*
RESEARCH ENGINEER | ADVISORS: **DR. TAVPRITESH SETHI, DR. PONNURANGAM KUMARAGURU** *March 2020 - June 2020*
- Worked on Agent Based and Classical Classical Compartmental Models in colloboration with a team of medical researchers
- Built an interactive dashboard deploying the models for live graphs. ***http://covision.tavlab.iiitd.edu.in***
- Built an NLP dashboard to speed up knowledge discovery during the Covid19 pandemic ***http://covidnlp.tavlab.iiitd.edu.in***

Research Publications

COBRA: Contrastive Bi-Modal Representation Algorithm | [Link] *TUSION worskshop, IJCAI 2020*

VISHAAL UDANDARAO*, ABHISHEK MAITI*, **SURYATEJ REDDY VYALLA***, DEEPAK SRIVATSAV*, YIFANG YIN, RAJIV RATN SHAH

Domains: **Cross Modal Retrieval | Deep Representation Learning**

Memeify: A Large-Scale Meme Generation System [Link] *ACM CoDS-CoMAD 2020*

SURYATEJ REDDY VYALLA*, VISHAAL UDANDARAO*, TANMOY CHAKRABORTY

Domains: **Information Retrieval | Deep NLP (Transformers)**

#IVoted to #IGotPwned: Studying Voter Privacy Leaks in Indian Lok Sabha Elections on Twitter [Link] *SocInfo 2020*

SAURABH GUPTA, AGARWAL ANANT, **SURYATEJ REDDY VYALLA**, ARUN BALAJI BUDURU, PONNURANGAM KUMARAGURU

Domains: **Privacy Leaks | Supervised Machine Learning**

Selected Projects

Deep Sentiment *Dr. Saket Anand*

COURSE: DEEP LEARNING *Feb 2019 - Apr 2019*
- Surveyed advanced deep learning techniques for sentiment analysis: Pure self-attention based models (transformers), Transfer Learning using Chain-Thaw method and Multi-Task learning.

Meme Retrieval *Dr. Tanmoy Chakraborty*

COURSE: INFORMATION RETRIEVAL (IR) *Feb 2019 - Apr 2019*
- Created a large meme dataset of 1.1 million captions across 128 meme classes. Built a cross modal IR system using CNN's and standard retrieval techniques learnt in course.

cudaRSA https://github.com/cse-560-gpu-computing-2019/fastrsa *Dr. Ojaswa Sharma*

COURSE: GPU COMPUTING *Feb 2019 - Apr 2019*
- Implemented RSA encryption and decryption in CUDA C and achieved speedups using optimizations in modular and bit level exponentiation.

Chain Reaction Game https://github.com/suryatejreddy/ChainReaction *Dr. Vivek Kumar*

COURSE: ADVANCED PROGRAMMING *Oct 2017 - Dec 2017*
- Developed the popular Chain Reaction Game in Java using OOPs concepts. The game also supports multiplayer mode on the same network.

Honors & Awards

'17,'19	**Dean's List for Academic Excellence**, IIIT Delhi
2018	**4th Position India Region, Top 20 Worldwide**, CSAW CTF Finals Organized by NYU
2017	**4th Position**, Pragyan CTF Organized by NIT Tricy
'16,'17	**1st Position, 2nd Position**, Scripting Challenge Organized by d4rkc0de
2016	**Gold Medal**, School Topper, OOEHS Sharjah UAE

Teaching and Leadership

Fall '21	**Teching Assistant**, Computer Networks 1	*GeorgiaTech*
Spring '19	**Teching Assistant**, Introduction to Engineering Design	*IIIT Delhi*
Fall '19	**Teching Assistant**, Computer Networks	*IIIT Delhi*
'17 - '20	**Coordinator**, Byld, Software Development Club	*IIIT Delhi*
'17 - '20	**Core Member**, d4rkc0de, Cybersecurity Club	*IIIT Delhi*
'17	**Event Head**, Stand Up Comedy	*Odyssey, IIIT Delhi*