Saumya Sandipkumar Gandhi

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Education

Visvesvaraya National Institute of Technology, Nagpur (CGPA: 9.04/10) **July 2018 — May 2022**
B.Tech, Computer Science and Engineering *Nagpur, India*

- Coursework: Probability Theory, Linear Algebra, Data Structures, Operating Systems, Analysis of Algorithms

Experience

Goldman Sachs **May 2021 — July 2021**
Summer Analyst *Bangalore, India (Remote)*

- Designed a reconciliation system using a Spring Batch job to periodically identify failed transfers
- Developed a replay system to perform replay of specific failed transfers using existing internal flow
- Reduced the projected turnaround time for failed transfers and chances of Sev2 incidents relating to transfer flow

MIDAS@IIITD **May 2020 – July 2020**
Summer Research Intern *Delhi, India (Remote)*

- Researched and implemented NLP models for detecting Suicide Ideation from social media posts
- Utilized adversarial learning and created transformer-based novel models that outperformed best models by 5% FScore
- Performed quantitative and qualitative analysis experiments and co-authored three research papers

SRIP - International Institute of Information Technology, Hyderabad **May 2019 – July 2019**
Summer Intern *Hyderabad, India (Remote)*

- Contributed to an MHRD open-source initiative to develop virtual labs for colleges
- Designed three experiments for the Artificial Neural Network section using ProcessingJS for students to learn about Interactive Activation and Competition models and Self Organizing Maps
- These experiments have helped Virtual Labs reach >4 Million cumulative pageviews

Publications

- Sawhney, R., Joshi, H., Gandhi, S., & Shah, R. (2020, November). A time-aware transformer based model for suicide ideation detection on social media. In Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing.
- Sawhney, R., Joshi, H., Gandhi, S., & Shah, R. Towards Ordinal Suicide Ideation Detection on Social Media. In Proceedings of the 14th ACM International Conference on Web Search and Data Mining.
- Sawhney, R., Joshi, H., Gandhi, S., Jin, D., & Shah, R. R. (2021). Robust suicide risk assessment on social media via deep adversarial learning. Journal of the American Medical Informatics Association.

Projects

Reddit Flair Detection | *NLP & Data Science [LINK]*

- Created and explored a reddit dataset of 14400 data points for flair(category) detection from posts
- Built multiple text-classification pipelines such as logistic regression, LSTMs, and deployed the best model (BERT)
- Achieved an accuracy of 67% for India subreddit, and deployed the model as a DJango web application

Attention Span Detection | *Computer Vision [LINK]*

- Led a team of 6 members to create a solution for detecting attention span in online instructor-led sessions
- Utilized facial keypoints for analyzing attention metrics such as yawning and head orientation using Python, and displayed the results to instructor via a mobile app along with analytics report for each session
- Judged by GreatLearning as the winning solution across more than 50 teams at the Smart India Hackathon 2020

Torchblaze | *Machine Learning [DOCUMENTATION]*

- Created a Python library for end-to-end Machine Learning using PyTorch to help with model training and deployment
- Developed generic templates for flask integration, ML unit testing, model dockerization, and ML project organization
- Deployed library to PyPi and created a roadmap for future developments as an open-source project

ACE Chess | *Speech Analysis and Web Development [LINK]*

- Created a real time voice-powered accessible chess web application using React, NodeJS and Azure Speech Studio
- Fine-tuned Azure Speech models for downstream task of detecting chess moves
- Implemented web sockets to facilitate real time communication between players

Technical Skills

Programming: C, C++, Python, Java
Research Tools and Libraries: PyTorch, Tensorflow, Pandas, Matplotlib, Plotly, LaTex, Git, Filmora, ReactJS, Spring

Achievements

- Winner of Smart India Hackathon 2020 for the problem statement: "Attention Span Detection in online-instructor led sessions".
- Winner of sprint 0 and sprint 1 of Major League Hacking Fellowship Program
- Course topper for following subjects: Computer Programming (100/100), Operating Systems, Software Engineering

Leadership

Co-Founder | Samvad: Debate and Discussion Club

- Co-Founded the college debating society and established vision and motto
- Organised 20+ events spanning debates, discussions, guest lectures, and student talks
- Drafted and compiled the annual society report detailing each event thoroughly to secure future club funding

Team Leader | Smart India Hackathon & National Innovation Contest

- Led a 6 member team over seven months to develop prototype for Smart India Hackathon 2020
- Coordinated the integration of the attention detection module and mobile application
- Drafted business model canvas for subsequent startup for phase II of National Innovation Contest

Warden's Nominee | Hostel Council, VNIT Nagpur

- Worked in a team of 20 members to ensure the smooth stay of 600+ hostel students
- Organised inter-hostel cultural and sports events to promote bonding across all cultures

Volunteering

- Selected as a student mentor to 15 fresher students to help navigate academics, extra-curriculars, and career options
- Taught Computer Programming subject to 30+ students in need of help as Remedial Class Student Faculty
- Carried out Food and Jacket Distribution drives in the winters with NGOs such as Robin Hood Army