JAY GALA

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EDUCATION

Dwarkadas J. Sanghvi College of Engineering   *2017 - 2021 (expected)*
(Mumbai University)   Overall GPA: 9.82/10
B.E. in Computer Engineering

Applied Mathematics, Discrete Mathematics, Algorithms, Databases, Machine Learning, Artificial Intelligence, Natural Language Processing

EXPERIENCE

Tata Consultancy Services   Dec 2019 - Feb 2020
Machine Learning Project Intern   *Internship*

· Developed NLP language models for customer analysis to prevent customer churn
· Prepared custom dataset, created surveys to handle open-ended and closed-ended questions
· Extracted feedback responses from handwritten forms using OCR
· Technologies: Python, Keras, NLTK, Gensim, OpenCV, NumPy, Pandas

Ucadd EdTech   Dec 2018 - Aug 2019
Web Developer   *Part Time*

· Built a platform for the organization's instructors to build courses
· Introduced data analytics to generate useful insights regarding the courses for the instructors
· Technologies: ReactJs, NodeJs, ExpressJs, MongoDB

Sensum Fintech   Jan 2019 - Feb 2019
Web Developer   *Internship*

· Constructed visualization graphs using plotly to show the trends in the finance trading markets
· Integrated APIs for stock recommendations and improved user experience by optimizing the builds
· Technologies: ReactJs, Material UI, Plotly

Unicode   Aug 2018 - June 2021
Web Developer & Student Mentor   *Part Time*

· Mentored a team of sophomores on projects such as Inventory Management, Masters and Placement Portals
· Conducted workshop on web and open-source development for over 100 students in the college
· Technologies: ReactJs, NodeJs, MongoDB, Django, MySQL

PROJECTS

Ocubot - Image-based Dialog for Visually Impaired   *Guide: Prof. Pratik Kanani*

· Incorporate knowledge from perception and language to have more natural conversations
· Reduced modality biases by improving visual context with the use of dense captions and attention
· Technologies: Python, PyTorch, NLTK, SpaCy, Jupyter

Image Captioning using Attention   *View Notebook*

· Generated descriptive captions from an image along with attention map
· Implementation of Show, Attend and Tell paper by Kelvin Xu et al. in PyTorch
· Technologies: Python, PyTorch, NLTK, Jupyter

PyTorch Paper Implementations *[View](#)*

· Implementations of deep learning papers using PyTorch
· Technologies: Python, PyTorch, NLTK, SpaCy, NumPy, Pandas, Jupyter

C Programming Exam Portal *[View Demo](#)*

· A paperless solution for conducting C programming exam for over 500 students at D. J. Sanghvi
· Reduced teacher workload by automating report generation
· Technologies: ReactJs, Material UI, NodeJs, ExpressJs, MongoDB

RESEARCH & PUBLICATIONS

Publications available at [Google Scholar](#)

Improving Image-based Dialog by Reducing Modality Biases Apr 2021

· 5th International Conference on Advances in Computing and Data Sciences, Springer, Presented

Pothole Detection and Dimension Estimation Nov 2020

· 35th International Conference on Image and Vision Computing New Zealand, IEEE

IoT and ML based Smart System for Efficient Garbage Monitoring Aug 2020

· 3rd International Conference on Smart Systems and Inventive Technology, IEEE

Virtual Farmer Jul 2020

· 11th International Conference On Computing, Communication And Networking Technologies, IEEE

SKILLS

Languages	Python, C, Java, JavaScript, SQL, HTML5
Databases	MySQL, SQLite, PostgreSQL, MongoDB
Libraries and frameworks	PyTorch, Keras, Scikit-learn, NumPy, Pandas, OpenCV, Gensim, SpaCy, NLTK, Flask, FastAPI, Streamlit, ReactJs, NodeJs
Others	Git, Jupyter, Docker, Raspberry Pi, LaTeX

CO-CURRICULAR ACTIVITIES

Teaching Assistant for an undergrad level Machine Learning Course - [UMLSC](#), Summer 2021

Part of **Shalizi–Stats reading group** led by [Swapneel Mehta](#) which focuses on the book *Advanced Data Analysis from an Elementary Point of View* and Bayesian Statistics taught by [Fenil Doshi](#)

Presented *[paper reviews](#)* as a part of the **Unicode Research Group** on the topics of Variational Inference & Probabilistic Programming

HONORS AND AWARDS

Winner at ACM LOC Hackathon (2020)

Top 3 at CodeShashtra (State-wide hackathon) (2020)

HOBBIES

Writing Blogs, UI/UX Design, Student Leadership