FENIL DOSHI

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EDUCATION

M.S (Computer Science) University of Massachusetts, Amherst *Expected: May 22*
B.E. (Computer Engineering) D.J. Sanghvi College of Engineering, Mumbai University [CGPA: 9.67/10] *Sep. 2020*
(Relevant Courses: Data Structures, Algorithms, Operating Systems, Database, Software Engineering, Object Oriented Prog.)

EXPERIENCE

1. Computer Vision Intern, Clutterbot: *Jun. 2020 - Present*
- Working on monocular and stereo depth estimation from images using Deep learning on embedded systems.
- Performing various optimizations on the inference model so it can work real-time on a toy-collecting robot.
- Helped in creating a custom dataset for indoor household & worked on camera calibration to obtain disparity maps.

2. Computer Vision Intern, Fusion Engineering: *Jun. 2019 - Aug. 2019*
- Converted printed sheet music to human-readable format. (Optical Music Recognition)
- Modified the DeepScores dataset by adding camera-noise in order to reflect real-world data.
- Recognized notes & their positions corresponding to clefs and staff lines using object detection and image processing.

3. Full Stack Developer, Prodigal: *Aug. 2018*
- Developed and deployed the entire website for Prodigal using *React.js* and *Node.js* as a freelancer. (prodigaltech.com)

4. React.js Developer Intern, Speridian Technologies: *Jun. 2018 - Jul. 2018*
- Developed frontend for multiple live projects using *React.js* and *Redux*.
- Created webpage for tracking the status of products using barcodes & developed a production management system.

5. Chatbot Developer Intern, Symphony: *Oct. 2017 - Jun. 2018*
- Built a chatbot using *Dialogflow*, *Node.js* and *Firebase*, which was voted as one of the most useful features when Symphony won the People's Choice award at Rice Business Plan Competition, Texas. It recommends songs to the user based on the user's interests, trends, activity, mood, and also provides industry updates, conducts music quizzes, etc.

SKILLS

Programming Languages: C, Java, Python, C++
Web Development: HTML, JavaScript, React.js, Redux, GraphQL, Django, PHP, Node.js, Flask
Databases: MySQL, PostgreSQL, MongoDB, Firebase
Libraries: PyTorch, TensorFlow, Keras, OpenCV, PyMC3 NLTK, Seaborn, spaCy, scikit-learn

PROJECTS

1. Stock Trainer: *(Django Rest Framework, HTML, Chart.js, Javascript, Python, Keras, SQLite, NLTK)*
- Created a web application that provides detailed analysis of companies (news, statistics, sentiment analysis on Twitter data, Google trends) and detects underlying patterns in stock prices using a recurrent neural network.
- Developed an interface that allows the user to watch, buy, and sell stocks, foreign exchange and crypto currencies with virtual money at real-time prices. It also allows users to track and manage their investments.

2. Image Modification with Text using Generative Adversarial Networks (GANs): *(Django, HTML, Pytorch, OpenCV)*
- Worked on Language-based Image Editing using conditional GANs with Text Adaptive Discriminators.
- Focused on the use of the model for Fashion Industry for modifying the colour, shape and style of user outfits.

RESEARCH

1. Normalizing Text using Language Modelling based on Phonetics and String Similarity *Aug. 2019 - Dec. 2019*
- Worked on converting informal SMS text to its English form using Masked Language modelling (BERT), string similarity and phonetic similarity, and achieved an accuracy of 86.7% on human-based evaluation. (arXiv: 2006.14116)

2. Stance Detection using Transformer Architectures and Temporal Convolutional Networks *Feb. 2019 - Jul. 2019*
- Co-authored a paper on Stance classification and presented it at IC4S 2019, Bangkok, Thailand. (ISSN: 2194-5357)
- Used a bidirectional LSTM and a Temporal Convolutional Network using contextual word embedding and achieved an accuracy of 81%, outperforming the baseline provided by Fake News Challenge.

CO-CURRICULAR

1. Web Developer and Mentor, DJ Unicode: (Open Source Organization) *Sep. 2017 - Sep. 2020*
- Created a Book Exchange Portal for the college department, which facilitates the exchange of books amongst students.
- Mentored a team of 20+ juniors over the course of two years and headed the development of a canteen-based Web and Android application for easing the ordering system at the college canteen.

2. Technical Head, DJSCE CodeStars: (Competitive Programming Committee) *Oct. 2018 - Sep. 2020*
- Conducted lectures on Data Structures and Algorithms and set problems for college-level coding competitions.

3. Attended **Summer School** on **Computer Vision** (CVIT) at IIIT-Hyderabad. *Aug. 2019*