BHAVIN JAWADE

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EDUCATION

University at Buffalo, The State University of New York
Master of Science in **Computer Science and Engineering** expected February 2022
GPA - 3.67, GRE Score - 324, TOEFL Score - 109

Shri G.S. Institute of technology and science
Bachelors of Engineering (B.E.) in **Information Technology** June 2019
CGPA - 7.75/10, Graduated First Class with Honors

EXPERIENCE

Research Foundation of State University of New York Buffalo, NY, US
Research Assistant: Center for Unified Biometrics and Sensors (Prof. S. Setlur) June 2020 – Ongoing
- Research Project: ChemML Machine Learning Web Interface, funded by NSF.
- Working on Scikit-learn, Celery, Flask, Django, Angular to build a full-stack application to interface ChemML.
- **Technologies:** Scikit-learn, Celery, Flask, Django, Python, Angular, DevOps (Jenkins).

Persistent Systems Pune, India
Software Engineer July 2019 – Dec 2019
- Worked as Full-Stack Developer in Banking, Finance and Insurance Domain (BFSI).
- Built Entity extraction OCR ML application for various Banks to easily analyze POS invoices.
- Built Invoice Management Application for a Supply Chain Financing Firm to automate supplier-distributor financing process. **Technologies:** Java, Spring, Microservices, Angular 8, React, Python, SQL, DevOps (Jenkins).

Preflet AI - Portugal Remote
Freelance Machine Learning Engineer Jan 2019 – Sept 2019
- Designed and Implemented end-to-end machine learning pipeline for Preflet AI application
- Implemented data connectors and Visualizers for Large Scale Datasets using Dask and Spark.
- **Technologies:** Python, Dask, TensorFlow, PySpark, Pandas, Numpy, Scikit-learn, Matplotlib, ElectronJS, Angular 8.

Prof. Rupesh Nasre - IIT Madras, Department of Computer Science Remote
Remote Research Intern (DAG update algorithm) May 2019
- Built an efficient algorithm to compute time to process updates on DAGs for hierarchical task scheduling.
- Algorithm computed the result for a million node DAG and thousands of updates within seconds (near linear ~O(n)).
- **Technologies**: Python, Cython, C++, Algorithms and Data Structures

Centre for Innovation Design and Incubation (C.I.D.I.) Indore, India
Project Lead - Elogbook: Smart City Project Indore (Dr. P.K. Chande and Dr. Apoorv Gaiwaik) April 2018 – Dec 2018
- Built an Intelligent Vehicle Tracking system to monitor vehicles using your smart phones and provide analytics.
- Implemented the complete architecture of the systems with analytics engine, client tracker and Admin Panel.
- Project Awarded by Minister of State and covered in various national newspapers.
- **Technologies**: Python, Django, JavaScript, Angular 8, TensorFlow, Google Maps API.

Vatsana (Wittyfeed) Indore, India
Full Stack Developer Intern (Shashank Vaishnav) June 2017
- Worked on Wittyfeed 3.0 and InnerVoice CMS, a platform that delivers content to millions of users.
- Built complete CMS using CodeIgniter framework (MVC and HMVC).
- T**echnologies:** PHP, Laravel, Bootstrap, Materialize CSS, JavaScript, SCSS, jQuery and TypeScript (Angular 4)

RESEARCH PAPER

Low computation in-device geofencing using hierarchy-based searching for offline usage Nov 2018
Publication: Published in IEEE Xplore (https://ieeexplore.ieee.org/abstract/document/9034346/)
Conference: ICICT 2018 (International Conference on Inventive Computation Technologies).

ACADEMIC PROJECTS

Decentralized Task Allocation Algorithm - Drones LAB University at Buffalo June 2020 - Ongoing
Working with Prof. Kartik Dhantu and Prof. Nicholas Mastronarde to design a decentralized task allocation algorithm and test it over UB-ANC, ns3 emulator. Algorithms under study: ACBBA, CBBA, HIPS. **Technologies:** C++, C, UB-ANC, ns3, Qt.

ChemML Machine Learning WebUI Framework - CUBS LAB University at Buffalo June 2020 - Ongoing
Chemml is a machine learning and informatics program suite for the analysis, mining, and modeling of chemical and materials data. I am responsible for building a web framework over ChemML wrapper that would allow users to visually create a machine learning pipeline and schedule ML tasks. **Technologies:** Angular, Django, Python, Scikit-learn, ChemML, Celery, Keras.

Reinforcement Learning - Actor Critic | DQN | Multiagent RL | Atari Games Jan 2020 – May 2020
Trained a CNN based Deep Q Network, DDQN network, Dueling Network and Policy gradient algorithms like REINFORCE and Advantage Actor Critic (A2C) algorithm to play Atari Games (RoadRunner and Breakout) at a human level performance. For DDQN my implementation got the same normalized score as the original DDQN paper. Final Project - Multiagent Reinforcement Learning algorithm to solve a Ship Docker Problem. **Technologies:** Pytorch, Tensorflow, OpenAI Gym

Computer Vision and Image Processing - Virtual Wall Jan 2020 – May 2020
Touch sensing and interaction detection using Stereo Vision and Object tracking. Used a Mynt Eye S-1030 Stereo camera to detect when the users hand is close enough to a selected section of wall. Used OpenCV CSRT Detector to locate the exact position of the hand and performed an operation on the computer. The project allows a user to convert any wall into a virtual touch screen using stereo vision. **Technologies:** Python, C++, OpenCV, SGBM, Mynteye SDK.

Now You See Me - The Blind Project Sept 2018 – Jan 2019
Built an android app for providing full contextual analysis of the surrounding in the form of voice feed to a visually impaired person. 'Now You See Me' uses a self-designed computer vision architecture built over TensorFlow, OpenCV and Microsoft Cognitive Services. Project video: bit.do/nysmvideo.

Other Projects: www.github.com/bhavinjawade

SELECTED COURSES

Analysis of Algorithms	**Deep Learning**	**Intro to Machine Learning**	**Information Retrieval**
Reinforcement Learning	**Biometrics and IoT**	**Intro to Computer Vision**	**Information Security**

SKILLS

Programming Languages: Python, PHP, Java, JavaScript, C++, C, SQL, HTML, CSS, R
Frameworks and Libraries: Angular 8, React, jQuery, TensorFlow, Pytorch, PHP Laravel, PHP CodeIgniter, Pandas, Dask, Numpy, OpenCV, Bootstrap, React-360, Java Spring
Databases: SQL Server, MySQL, MongoDB, Redis
Software Tools: MATLAB, Visual Studio, Android Studio, Photoshop, Jupyter Notebook

ACHIEVEMENTS

- Represented India at Microsoft Student Partners Asia Summit at Taipei, Taiwan
- Awarded for my project eLogbook by Hon' Minister of State (Higher Education) Mr. Deepak Joshi
- Grand Finalist Smart India Hackathon.
- World rank 26 (out of 1667) in Code Gym Hackathon on Talent.social.
- One of the winners of WittyHacks Hackathon 2018.
- ACM ICPC (International Collegiate Programming Competition) Gwalior Regionals, Represented Institute at ACM ICPC 2017 IIITM Gwalior. (Team alpha_001).
- Awarded tech speaker at NIT Bhopal and Medicaps University Indore
- BalVigyan: Best Innovative idea and project
- School Topper 12th Standard 2015. (S.T. Paul H.S. School)