Ishan Bhatt

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EDUCATION

Department of Computer Science, North Carolina State University **January 2021 – December 2022**
Master of Science (Computer Science) *Raleigh, North Carolina, United States*
Grade Point Average (current): 4.0+ on a 4-point scale | Full tuition waiver (Graduate Student Support Plan -GSSP) | Phi Kappa Phi

Birla Vishvakarma Mahavidyalaya, Gujarat Technological University **August 2015 – June 2019**
Bachelor of Technology (Computer Engineering) *Vallabh Vidyanagar, Gujarat, India*
Cumulative Performance Index: 9.29 on a 10-point scale | **GATE (Computer Science): All India Rank – 1357** out of 99932 candidates

EXPERIENCE

Walmart Global Tech - **eCommerce (AI End-to-End : Imagery & Rich Media)** **Summer 2022**
Senior Datascientist (Intern) *Bay Area, CA, United States*
- Worked on design, development and deployment of a project to improve the aesthetic appeal of images associated with Apparel products.
- ✓ Project had a **positive impact on 44% (1B items) of products** under the category: "Clothing, Shoes & Accessories"

North Carolina State University - PICTure Research **June 2021 – December 2022**
Graduate Research Assistant - Machine Learning *Raleigh, NC, United States*
- Thesis Research Area: **Optimizing Graph Neural Networks using latest generation low-level GPU intrinsics**.
- ✓ Worked on Applied-ML projects including: **Pre-season Hurricane Prediction, Day-ahead Net Load Forecast, AI basketball coach**

Tata Consultancy Services Limited - **Research & Innovation (Manufacturing)** **January 2019 – December 2020**
Project Intern & (later) Systems Engineer - AI/ML *Mumbai, MH, India*
- **Built ML-powered Fault Detection Systems for** Car Seats, Jet Engines (Vibration Detection using sound), Metal Welds (Visual Weld Strength Analysis), PCBs (Detect missing components from images), etc.; Integrated these with TCS's *Visual Cognitive Quality Assurance* suite
- ✓ Was usually responsible for proposing a new idea and deploying a PoC/Pilot application; **Completed over ten assignments**

TECHNICAL SKILLS ** indicates working-knowledge*

Programming: Python 3, C++/C, JavaScript, Java*
Machine Learning: NumPy, pandas, scikit-learn, OpenCV, NLTK
Deep Learning: TensorFlow(1.x) + Keras, PyTorch*, CUDA*
Visualization: matplotlib, Seaborn, D3JS, tableau, dash.plotly

Web front-end: HTML 5, CSS 3, Bootstrap, JavaScript, ReactJS*
Web back-end: Python Flask, NodeJS, PHP, SQL, PySpark
Internet of Things: Arduino, Raspberry Pi, peripherals
Cloud/DevOps*: git, AWS, GCP, Azure, Docker

PROJECTS

Terrain Recognition | *Deep Learning - Time Series Analysis*
- Built an Ensemble of 1D-Auto-encoders and Bi-LSTMs to perform Sequence-to-Sequence Classification for **continuous terrain prediction using data stream from sensors** (accelerometers and gyroscopes) **attached to a person's prosthetic lower limb**
- ✓ Achieved 93.5% weighted-mean F1-Score on the private leaderboard; **Stood 1st** (among ≈ 120 participants) in the competition

Human Pose Estimation (HPE) | *Deep Learning - Computer Vision*
- Built an HPE system taking inspiration from CPMs & SHMs; **Achieved 82% PCKh@0.5 which is 10% less than State-of-the-Art**

LAMP-stack website | *Web Development*
- Proposed, developed and maintained **a website for the National Cadet Corps unit hosted on college campus** from 2018 to 2020
- ✓ Was awarded **NCC Certificate of Excellence** for this work; Currently, NIC-India hosts a modified version

Maze Exploration and Navigation | *Reinforcement Learning; IoT*
- **Trained an RL agent** using Deep-Q-learning and Policy Gradient methods **to navigate through an uncharted region** on-the-fly
- Built a Raspberry Pi powered pilot-vehicle with LiDAR (for location tracking & obstacle detection) that could navigate in sparse mazes

LEADERSHIP / EXTRACURRICULAR

Students' Core Committee (SCC), BVM Engineering College *Member & Computer Engineering Branch Co-head*
- SCC organizes BVM's annual techno-cultural festival UDAAN; 5000+ participants from across the state are hosted on the BVM campus
- ✓ **Was directly responsible for conducting 4 events with ≈ 1000 participants**; Received **Spirit of Udaan award** for exceptional contribution

National Cadet Corps (NCC), 2 Composite Technical Company (NCC) *Cadet & (later) Under Officer*
- ✓ **Was directly responsible for** ensuring proper training of ≈ 60 cadets; Proposed, developed and maintained a website for the unit
- ✓ Received **NCC Certificate of Excellence**; Received NCC Officers' Training Academy (Kamptee) **Certificate of Merit**, etc.

Writing
- ✓ Writer for Analytics Vidhya's Online Publication; **200+ hours of total read time** on my Medium blogs related to Machine Learning
- ✓ Active Writer on Quora since 2015; ≈**100K lifetime views** on my answers to questions related to various topics in Computer Science
- ✓ Contributed to most major campus periodicals at BVM; 4 of my non-technical articles were featured in various campus publications