PARTH SHAH

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WORK EXPERIENCE

University of Florida   Gainesville, FL

Research Assistant - *Modern Artificial Intelligence and Learning Technologies (MALT) lab*   *Oct 2019 to Present*

- **VAE - Scientific data compression:**
  - *(In progress)* Developing state-of-the art compression algorithms and **autoencoders** of high dimensional physics data for supporting exascale computing at the Princeton Plasma Physics Laboratory.
- **Temporal data - Traffic estimation:**
  - Devised a **queue length prediction** algorithm at signalzed road intersections.
  - Analysed data from induction loop sensors for estimation of travel times using **platoon matching**.

Graduate Assistant - *iHeal lab*   *Jan 2020 to May 2020*
- **Intelligent ICU:** Implemented **Pose estimation** from RGB and depth images for monitoring patients in the ICU

HERE Technologies   Mumbai, India

Senior Software Engineer   *Mar 2019 - Jul 2019*
- **Computer vision:**
  - Developed a rapid prototype for a new product, later released as the [HERE LiveSense SDK](#).
  - Optimized **real-time object detection, multi-object tracking** and **distance estimation from 2d image stream**, to work on edge devices with hardware constraints.

Software Engineer 2   *Jul 2017 - Feb 2019*
- **Machine learning:**
  - Engineered automated detection of duplicate places in geospatial data.
  - **Collaborated with Subject Matter Experts (SMEs)** to understand and concretize the problem statement.
- **Full Stack development:**
  - Ideated, designed and implemented a drag and drop tool to create domain specific business rules, using the **visual programming** paradigm.
  - **Improved** the average turn around time of a rule by **80%**

Intern   *Jul 2016 – Dec 2016*
- **Backend development:** Built business rules in **scala**.

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, Javascript (& HTML+CSS), Scala, SQL
- **ML Libraries:** Pytorch, Keras, Pandas, Numpy, Sklearn
- **Web Frameworks:** Vuejs, Angularjs(1.x)
- **DevOps:** Docker, Jenkins, AWS, gcloud, Git
- **Software engineering:** agile

EDUCATION

- **University of Florida, United States:** MS in Computer Science, **GPA: 3.77/4.0**   **Expected Graduation: May 2021**
  Coursework: *Fundamentals of Machine Learning, Analysis of Algorithms, Advanced Data Structures, Mathematics for Intelligent Systems*
- **BITS Pilani, Hyderabad Campus, India:** B.E. in Electrical and Electronics Engineering   **Aug 2013 - Jul 2017**
  Coursework: *Quantum computing, cryptography*

PUBLICATIONS

- P. Shah, A. Kanniganti and J. Soumya, "Fault-tolerant application specific Network-on-Chip design," 2017 7th International Symposium on Embedded Computing and System Design (ISED), Durgapur, 2017, pp. 1-5. **DOI:** [10.1109/ISED.2017.8303920](#)
- Rahul Sengupta, Rohith R. K. Reddy, Parth Shah, Anand Rangarajan and Sanjay Ranka, (in press), "A Platoon Matching Approach for the Estimation of Arterial Travel Time Distributions," 2020 IEEE Intelligent Transportation Systems Conference (ITSC)