PARTH SHAH

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SUMMARY

I am a software engineer specializing in integrating AI solutions with products. I have a short yet diverse experience working in various areas like web development, data science, devops, backend development as well as app developement. I love to get involved in the entire lifecycle of a product - from brainstorming product ideas, design, implementation, model training to deployment at scale and devops.

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:** We propose a novel architecture for **autoencoders and variational autoencoders for compression and generation**, respectively, of higher dimensional physics data.
- **Temporal data - Traffic estimation:** Implemented a queue length prediction algorithm at signalized road intersections for estimation of travel times by analysing data from induction loop sensors using **platoon matching**.

Graduate Assistant *- iHeal lab* — *Jan 2020 to May 2020*

- **Intelligent ICU: 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. It involved **real-time object detection, multi-object tracking** and **distance estimation from 2d image stream**, on edge devices with hardware constraints.

Software Engineer 2 — *Jul 2017 - Feb 2019*

- **Machine learning:** Automated detection of duplicate places in geospatial data. Worked with Subject Matter Experts (SMEs) to understand and concretize the problem statement. Implemented, tested and deployed models at scale.
- **Full Stack development:** Ideated, designed and implemented a drag and drop tool to create domain specific business rules, using the **visual programming** paradigm. Led to an **improvement of 80%** in the average turn around time of a rule.

Intern — *Jul 2016 – Dec 2016*

- **Backend development:** Implemented 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)