Daksh Jotwani

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Education

- **Purdue University** West Lafayette, IN
  B.S. Computer Science, Mathematics *August 2016 - Present*
  - GPA: **3.94/4.00**, Expected Graduation Date: **May 2020**
  - Coursework: Deep Learning, Data Structures, Algorithms, Systems Programming, Linear Algebra

Work Experience

- **Tesla** Palo Alto, CA
  Software Engineer Intern *September 2019 - Present*
  - Built an OTA update system for Tesla's industrial energy products (Powerpacks and Superchargers) from CentOS to Tesla's proprietary OS.
  - Wrote a TLS/websocket client in C for an unannounced product to communicate with Tesla's remote command and logging services.

- **Flipkart Myntra** Bangalore, India
  Data Scientist Intern *May 2019 - August 2019*
  - Trained and deployed a face recognition-based authentication service to allow registered Flipkart customers to enter their unmanned stores.
  - Prototyped person reidentification (ReID) and human action detection models to automatically generate shopping cart receipts for Flipkart and Myntra's offline stores.

- **Myntra** Bangalore, India
  Software Engineering Intern *May 2018 - August 2018*
  - Applied computer vision techniques to monitor store traffic, analyze age/gender demographics, identify returning customers, and detect visual customer satisfaction.
  - Developed a system where computer vision-based inferences from store cameras are broadcast to store devices to provide personalized services such as product/size recommendations to customers.

Projects and Contributions

- **(Contribution) PyTorch** *June 2019 - July 2019*
  - Built a class-balanced dataset batch sampler (`PKSampler`) and an online triplet mining loss function (`TripletMarginLoss`) for PyTorch's torchvision module to tackle similarity learning problems.
  - Wrote training/evaluation reference scripts to showcase torchvision's similarity learning tools.

- **GTAi: Self Driving Car in GTA 5** *March 2019 - Present*
  - Built a data-collection pipeline to map frames to controller inputs and load them for model training.
  - Modelled a neural network architecture to output controls for a given frame using ResNet50 as a feature extractor, followed by a LSTM to infer temporal information from a sequence of frames.
  - Working on pre-training the ResNet50 backbone on the COCO dataset using RetinaNet and Focal Loss.

- **PayShare** *May 2018 - September 2018*
  - Developed a web application using React and Firebase to split expenses among a group of people.
  - Applied Tesseract OCR to scan receipts and generate a list of items for users to select and split.

Skills

Languages: Python, JavaScript, C/C++, Java, Go. **Frameworks:** PyTorch, TensorFlow, OpenCV, Git, React.