Gunjan Chhablani

✉ chhablani.gunjan@gmail.com 　in gchhablani 　⬡ gchhablani 　🌐 gchhablani.github.io 　📞 +1-470 830 7878

Education

Georgia Institute of Technology | *Atlanta, GA, USA* | 　　　　　　　　　　　　　　　**Aug 2022 – May 2024**
- M.S. Computer Science (ML Specialization, Thesis Track), GPA: 4.0
- Coursework: DL for Robotics, Deep Learning, Computer Vision, Machine Learning, Natural Language Processing

BITS Pilani, K.K. Birla Goa Campus | *Goa, India* | 　　　　　　　　　　　　　　　**Aug 2016 – Sep 2020**
- B.E. Computer Science, CGPA: 9.6/10, Batch Rank: 3/617
- Featured Coursework: Neural Networks & Fuzzy Logic, Machine Learning, Data Mining

Experience

Georgia Institute of Technology | *Atlanta, GA* | *Graduate Research Assistant* 　　　　**Aug 2022 - Present**
- **EvalAI**: Reduced AWS-based infrastructure costs from $7k to $4k/month and enhanced Django for better platform performance.
- Designed monitoring, easy approvals and auto-scaling, resulting in increased ease of management.
- Guided two students during Google Summer of Code 2023.
- **Tech Stack**: Django, AWS (EC2, SQS), Python 3.7/3.8, Docker, Prometheus, Kubernetes (EKS), StatsD, and Bash.

Oracle India Pvt. Ltd. | *Hyderabad/Bangalore, India* | *Member of Technical Staff* 　　**Sep 2020 – Aug 2022**
- **Custom Text Classification AI Service**: Developed multi-class classification training pipeline and integrated evaluation metrics. Managed training images, evaluation worker, and online model serving.
- **Oracle Fusion - HCM Development**: Contributed to UI and model development. Automated process tasks, including REST API testing.
- **Tech Stack**: TensorFlow, TF Serving, Python, git, Docker, Java, SQL, Oracle ADF

University of Pittsburgh | *Pittsburgh, PA* | *Research Intern* 　　　　　　　　　　**Jan 2020 – Aug 2020**
- **Enhanced Choroid Segmentation**: Worked on improving choroid segmentation in OCT scans, aiming to expedite the detection of diabetic retinopathy. Implemented an efficient U-Net++ architecture with dense skip connections and dice loss, achieving highly precise segmentation masks (average precision score of 0.96).
- Our abstract was accepted at ARVO 2021.

IBM India Pvt. Ltd. | *Gurgaon, India* | *Project Trainee* 　　　　　　　　　　　　**May 2019 – Jul 2019**
- Developed a MaskRCNN model in TensorFlow for car parts segmentation and damage detection for an insurance client with 85% mAP score.

Publications

- **MultiViz: Towards Visualizing and Understanding Multimodal Models**. ICLR 2023.
- **Superpixel-based Knowledge Infusion in Deep Neural Networks for Image Classification**. ACMSE 2022 (Best Short Paper).
- **DRIFT: A Toolkit for Diachronic Analysis of Scientific Literature**. EMNLP 2021 (Demo Track).
- **Datasets: A Community Library for Natural Language Processing**. EMNLP 2021 (Demo Track, Best Paper).
- **Multitask Prompted Training Enables Zero-Shot Task Generalization**. ICLR 2022 (Spotlight).

Projects

InstanceImageNav 　　　　　　　　　　　　　　　　　　　　　　　**May 2023 – Present**
- Exploring the task of (unseen) environment instance-specific image-based goal navigation task in Habitat Lab.
- Improving and analysing visual representation learning techniques for end-to-end RL navigation.

MultiViz 　　　　　　　　　　　　　　　　　　　　　　　　　　**Aug 2021 – May 2022**
- With a team of CMU students, prepared a framework compiling several interpretability and visualization techniques, some of which are novel in order to analyze multimodal (vision and language) models and datasets.

Core Contributor at HuggingFace 　　　　　　　　　　　　　　　　　**Feb 2021 – Feb 2022**
- Contributed and maintained the VisualBERT, PLBart and FNet models in PyTorch.
- Contributed to over 11 datasets and worked on metadata validation for the datasets library.

Multimodal Multilingual Models 　　　　　　　　　　　　　　　　　**Jul 2021 – Aug 2021**
- Participated in the HuggingFace JAX/Flax sprint for multilingual image captioning and multilingual VQA.
- Prepared a Streamlit Demo on the ViT + BERT and ViT encoder + BART decoder trained on translated (MarianMT) CC12M image captioning using TPU v3 VMs. The project was ranked among top-15/50.

Technical Skills

Languages: Python, Java, C, C++, SQL, Shell
Technologies/Frameworks: Git, PyTorch, Keras, Tensorflow, AWS, Scikit-learn, Streamlit, Django, LaTeX, Habitat Lab

Awards & Honors

- **Merit Scholarship:** Awarded Merit Scholarship for consistently ranking in the top 1% of students for all eight semesters at BITS Goa.
- **Bronze Medal:** Earned a Bronze Medal for achieving the 3rd rank among 617 students in the batch.