SHUBHANGI UPASANI

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY *Atlanta, Georgia, USA*

MSCS, Machine Learning, Aug 2019 - May 2021
GPA: 4/4

DELHI TECHNOLOGICAL UNIVERSITY (DTU), *NEW DELHI, India*

B.Tech, Electronics and Communication Engineering
Aug 2015 - May 2019
CGPA: 9.21/10

SKILLS

Languages: Java, Python (Proficient)
 C/C++, CUDA, MATLAB, HTML, CSS, JavaScript (Intermediate)
Technologies: Linux, Hadoop, Amazon Web Services, Angular, SQL, databases
Machine Learning: scikit-learn, NumPy, Pandas, SciPy, Matplotlib, frameworks (PyTorch, Keras, TensorFlow), neural networks, OpenCV, data structures, ML algorithms, data analysis, data visualization, probabilistic/statistical modeling

RESEARCH EXPERIENCE

Student Researcher | Hays lab, Georgia Tech
Prof. James Hays | Jan 2020 to Present
- Building machine learning models for **lane-graph inference** for lifesaving, **self-driving** vehicles using **time series LiDAR** data from Argoverse dataset
- Automating semantic **map creation** through **3D scene understanding** for safe autonomous navigation in new environments

Publication:

Dr. Akshi Kumar, Dr. Anand Nayyar, Shubhangi Upasani and Arushi Arora, Empirical Study of Soft Clustering Technique for Determining Click Through Rate of Online Advertisements, International Conference of Data Management, Analytics and Innovation (ICDMAI) 2019, Kuala Lumpur, Malaysia

Accolades:

WiT Regatta Seattle 2020 scholar — ICDMAI Malaysia 2019 scholarship — Rank 1 in university in CodersBit 2018 — Ranked among top 5% students in undergraduate major — Merit scholarship from FIITJEE, New Delhi

COURSES

Machine Learning, Computer Vision, Natural Language Processing, Deep Learning, Big Data Analytics, Computational Science and Engineering Algorithms

PROFESSIONAL EXPERIENCE

Software Development Engineer Intern_____

Amazon, Seattle USA / May 2020 – Jul 2020

Led **end-to-end development** (design, coding, testing, deployment) of **visualizer** for debugging inventory plans by supply chain (New York division)

- **Implemented audit data prober** to help product managers and retail users debug inventory plan computations without external developer support
- **Minimized plan load times by nearly 50%** by virtue of lazy data loading
- **Reduced cost to $10** per month by implementing a serverless architecture

Technologies Used: Native AWS (Lambda, S3, CloudFront, API Gateway), Java, Rest API, Angular, JavaScript, HTML

Software Engineer Intern_____

Western Digital (SanDisk), India / June 2018 – Jul 2018
- Executed T-SQL programs to **minimize dashboard data retrieval times by 5 folds** and subsequently deployed in production
- Delivered solutions for assessing **drive's lifetime** and endurance utilizing statistical **machine learning models**; **achieved 80% accuracy**
- **Co-led development of RPG Schematic Generator** project; solved 3 of 5 major bugs and accelerated deployment process by a week

Technologies Used: Microsoft SQL Server, T-SQL, Python, scikit-learn, C#

Software Development Engineer Intern _____

Andritz Hydro Pvt. Ltd, India / Nov 2017 – Jan 2018
- Developed an online **attendance monitoring and evaluation** system for increased productivity and reliably accurate time tracking
- Accomplished **swift internal messaging** by employing a **chat-server module**; came up with onsite bug fixes for a testing period of 10 days

Android Development Intern_____

DTU startup, India / Jun 2017 – Aug 2017
- Contributed towards development and deployment of a social media app to attain student networking
- Led a team of 7 students for developing Photo Editor feature and base template of app; accomplished significant user-base

ACADEMIC PROJECTS

Facebook Habitat AI Challenge, Prof. Zsolt Kira | Georgia Tech
- Implemented **supervised learning algorithm** baseline namely behavioral cloning for **point goal navigation** task in an indoor environment
- Developed a benchmark based on RNN for predicting optimal actions given the state of an embodied agent with nearly **60% accuracy**

Semantic Segmentation on Landsat-8 Imagery, Prof. Ling Liu | Georgia Tech
- Tested various **image processing techniques** for hyperspectral, multi-band satellite images
- **Trained and tuned deep learning models (SegNet, Unet)** to study ice sheet depletion and effects of global warming in Antarctica

Visual Relationship Detection, Prof. Devi Parikh | Georgia Tech
- Extracted visual relationships between objects through **object detection** and **segmentation** in images; utilized **few-shot learning** and **triplet loss**
- Trained **CNN models** with bounding box masks and glove embedding vectors; Achieved an **accuracy and precision of 70% and recall of 65%.**