Shanuj Shekhar

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Education

Stony Brook, NY **Stony Brook University** **Aug 2019 – Dec 2020** ***(Expected)***

- Masters in Computer and Information Science from State University of New York at Stony Brook | **GPA: 3.61/4.00**
- Graduate Coursework: Machine Learning; Visualization; Analysis of Algorithms; NLP; Operating Systems; Virtual Reality.

Punjab, India **NIT Jalandhar** **Aug 2015 – May 2019**

- Bachelors of Technology in Computer Science and Engineering from Dr. B.R.Ambedkar National Institute of Technology | **GPA: 8.53/10.00**
- Undergraduate Coursework: Data Mining; Data Structures and Algorithms; AI; Advanced Programming Concepts Using Java; Agile Software Development

Work Experience

Builder/Developer @ Open Lab ***Mozilla Fix-The-Internet Open Lab (Spring)*** **April 2020 – June 2020**

Internship || Python, HTML/CSS/Javascript, Flask, Heroku

- Developed an online platform for matching donation related resources like food, clothing etc.using relevant tweets. The website lists donation/request tweets location wise, based on search. Website: https://help-for-all.herokuapp.com/
- Implemented Naive Bayes Classifier for classification of tweets (Donation/Non-Donation, Donor/Requestor & Resource Type classification), with an accuracy of 80%, after parsing them using standard NLP techniques. (See Project)

Summer Intern ***Cadence Design Systems, Inc.*** **June 2018**

Text Detection in Images || C++

- Extracted text from Microprocessor Pin Diagram images || Using Posterior Probability concept text accuracy was improved

Research Intern ***NSUT, Delhi*** **June 2017**

Reusable Hybrid Test Automation Framework for Web Based Scrum Project (Selenium Tool 2.0) || Java

- Achieved Automation Testing on Amazon, Flipkart e-commerce websites (Publication Link)

Technical Experience (Projects)

- **Smart IoT Climate Control System** (Jan 2020 – Ongoing). Currently developing a smart IoT climate control system by leveraging machine learning techniques for damper actuation (when to turn on heating/cooling) || Deep Neural Networks, PyTorch (See Project)
- **D3 Visualization of COVID-19 Pandemic** (Mar 2020). I have created a dashboard for visualizing COVID-19 cases in the USA, how the disease spread and how it affected the country's unemployment rates || Python, D3.js, Flask (See Project)
- **Detect Heavy Drinking Episodes** (Feb 2020). I have used Random Forest Classifier to identify intoxicated individuals according to their TAC labels and detect drinking episodes using accelerometer samples from their mobile devices || Python (See Project)
- **Augmented Reality Video Game** (Jan 2020). I have designed a game in which a user can interactively build an augmented 3D scene on a planar surface in the real world || C#, Unity Tool, Vuforia (See Project)
- **Knowledge-backed Generation Model Using Post-Modifier Dataset (PoMo)** (Nov 2019). I have generated phrases to describe an entity in a sentence using Natural Language Processing and Natural Language Understanding || Model Architecture - Bi-LSTM (2 layer) model with attention function || Python (See Project)
- **Emotion Recognition** (Jun 2019). I have performed facial expression analysis in near real-time live webcam feed & classifies 8 different emotions using Support Vector Machine with accuracy of 67% || Python, OpenCV (See Project)
- **TFIDF** (Feb 2017). I have calculated the term frequency for terms present in 2000 documents || Java (See Project)

Additional Experience and Awards

- **Research Paper** Titled Reusable Hybrid Test Automation Framework for Web Based Scrum Project **published** in **Journal of Applied Science and Engineering**, Taiwan, 2018
- Completed **JP Morgan & Chase Software Engineering Virtual Experience** (Summer 2020) (See Project)
- Acquired **Top 10 Rank** in Undergrad in class of Computer Science

Languages and Technologies

- Code mainly in **Java & Python**; Proficient in **JavaScript, HTML, CSS, D3.js**; Familiar with **C/C++, C#**;
- **Machine Learning & Data Analysis:** PyTorch, Tensorflow, Numpy/Scipy, Pandas, Scikit-learn, Matplotlib, OpenCV, nltk
- **Other Tools:** Google Colab, Jupyter, LaTeX; Visual Studio; Eclipse; Sublime Text; Github; Unity Tool; Blender