SHIVAM SINGH

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EDUCATION

University of Texas, Arlington - master's in computer science — August 2019 - May 2021
Specialization in Artificial Intelligence — **GPA: 3.2**
Jaypee Institute of Information Technology, NOIDA(India) — August 2010 - October 2016
Bachelor's in Computer Science — GPA: 3.0

SKILLS

Certification: Big Data Science and Data Analytics from AnalytixLabs, Gurugram(India).
Current Subjects: Neuroimaging Analysis with Computer Vision, Big Data Management and Analysis.
Language & Framework: C/C++, J2EE, HTML5+CSS3, Python, tkinter, Flask, Pandas, TensorFlow, NLTK, SciKit Learn, Seaborn, NumPy, SciPy, Keras, matplotlib, JavaScript, shell scripting, Spark, UNIX/Linux, HDFS.
Cloud & IDES: Eclipse, NetBeans, Android Studio, Jira, Git, Azure.
Database: MySQL, MS Access, Oracle, SQL Server Management Studio, Mongodb.

EXPERIENCE

- **Masmic,** Delhi (India) - Product Manager — October 2018 - February 2019
  - Designed the initial product, a blockchain based Q&A platform where users were incentivized to answer on the platform.
  - Defined the user flow and logic of core modules like plagiarism, reward systems game theory and referral systems.
  - Broadened to get users from 150+ countries.
  - Accomplished around 1 million daily active users with engagement of 20-30 minutes spent daily by an average user on the website.
  - Exceeded 300,000+ answers posted and 5 million+ votes exercised on 5500+ bounties.
  - Reduced paid user acquisition cost to less than 1$ (currently < 0.2$)
- **KoinOK,** Delhi (India) - Co-founder — September 2017 - September 2018
  - Co-founded the startup and coordinated a small team of 6 members.
  - Led the prototyping of the first version, an open order book cryptocurrency trading platform.
  - Managed and motivated the launch of the product in 5 months with just an initial budget of $10,000.
  - Administered processes for various fields like legal, finance, operation, and business partnerships.
  - Achieved 5,000 daily active traders within 4 months with a maximum of 0.5 million USD daily trade volume.
  - Negotiated two term sheets from Chinese & Indian investors but unfortunately the deal was cancelled due to RBI ban.
  - Sold our technology to China & Singapore based organizations as whole tech was in house.
- **Wibe Labs Private Limited,** Delhi (India) - Software Engineer — May 2015 - February 2017
  - Gathered system requirements for chrome extension project, targeting e-commerce sites.
  - Carried out profiling based on analysis of Google AdWords and Infinity, which pivoted the application.
  - Increased user engagement by 13%.
- **National Thermal Power Corporation (Internship),** NOIDA(India) - Software Engineer — June 2013 - July 2013
  - Developed .Net dashboard to track permissions and authorizations of personnel involved in the maintenance of various power plants.

PROJECTS

- **Natural Language Processing** — March 2020 - May 2020
  - **Kaggle Challenge** - Built a classifier to detect occurrence of disasters from a stream of tweets using Naïve Bayes classification and Bag of Words methodology with 76.8% accuracy.
  - **Review to Ratings Converter** - Launched a flask based weblink to input text and predict score for the given reviews of a game and the ratings (out of 10) were determined, using Naïve Bayes classifier, with RMSE of ± 2.5.
- **NEURAL NETWORK FROM SCRATCH** — January 2020 - February 2020
  Coded a simple perceptron and linear associator from scratch in Object Oriented Programming style, which is similar to TensorFlow Libraries, to learn the working of neural network and how it's implemented on TensorFlow, using the following Neural Network Algorithms:
  - **Simple Perceptron & Linear Associator Neural Network** using Single Layer Perceptron that used Perceptron learning rule and Pseudo-inverse method, Hebbian learning for Linear Associator, to classify a simple dataset with optimal accuracy.
  - **Multilayer Neural Network** gradient descent algorithm to predict MNIST dataset.
- **Examined and tested Convolutional Neural Network with CIFAR-100 Dataset** — March 2020 - March 2020
  Utilized Deep Learning with TensorFlow to get an accuracy of 66%.
- **N- Arm Bandit Problem (Reinforcement Learning)** — February 2020 - February 2020

Designed an elevator scheduler to optimize the time an elevator takes to reach a user on calling it, using n-arm bandit problem, that optimizes the position of the elevator to serve people by 4 seconds lesser on call, and adapts with the changing flow of people at different times.

- **Q-Learning in C program (1-TD | Reinforcement Learning)** March 2020 - March 2020
  Modelled a Q-learning algorithm in C to balance a 3-Dimensional inverted pendulum.
- **Dyna Q Learning and Prioritized Sweeping (Reinforcement Learning)** March 2020 - April 2020
  Defined a grid world simulation environment where the action to move up, down, left and right was unreliable, to optimize the cost of Reinforcement Learning exploration, implementing Dyna Q algorithm for the agent to traverse the grid world effectively with minimal cost in simulator by simulating through its imagination of the simulator.
- **Deep Q learning | Deep Reinforcement Learning | Experience Replay Buffer** April 2020 - May 2020
  Trained Atari Ping-Pong to play against the computer using Deep Q learning with Convolutional Neural Network in TensorFlow, with the game image frame as input and "up" and "down" button as output and win the game.
- **Implemented k-NN on Iris dataset from scratch** February 2020 - February 2020
  Coded and executed k-NN classification algorithm, in Object Oriented methodology, on the Iris dataset and got an accuracy of 0.97 (with Cosine Similarities at k = 3, 5, 7, 9 Achieving maximum accuracy at 7)
- **ActTrack** — Active Tracking of parcel and courier delivery February 2014 - May 2014
  Developed an Android app to track any parcel and courier service in real-time and providing a medium to interact directly with the shipping personnel for any other inquiry or requests, making it easier for 493 among 500 users in a close group small survey of people working in the IT sector, to customize their delivery at their ease.
- **Baahan** — Cloud based vehicle registration system August 2013 - November 2013
  Designed and developed a hassle-free platform for people to identify and manage vehicle registration, its related information (insurance renewal, stolen vehicle search, historical vehicle information retrieval, and traffic infringements) and consequently its database, which attracted only 27% of users because of pricey smartphones and limited internet access, in the targeted audience.
- **CarEase** — smart-mobile operated car bot February 2013 - April 2013
  Devised a Smart Car bot, using Arduino, which was fully controlled by an Android Smart Mobile phone to control and automate the utilities inside the car and to provide other functionalities like proximity assistance, sensors assisting in safer and easy driving.
- **Joutique** — a boutique of Java tools August 2010 - December 2013
  Customized and consolidated basic Java-based tools like Find and Replace Editor, Content editor, Stream writer, customized JAVA IDE, by exploiting Reflection API, which helped more than 42% of JAVA focused student developers in my batch during undergrad.
- **My KBC** — My version of "Who Wants to Be a Millionaire?" April 2013 - May 2007
  Programmed a user interactive basic simulator of Who Wants to Be a Millionaire using JFC/Swing (AWT) with a fun of 100% and a 110% motivation for designing and developing new apps for fun and ease of people around me.

RESEARCH PRESENTATIONS AND ACADEMIC PROJECTS

- **Cortical Graph Neural Network for AD and MCI diagnosis and transfer learning across populations**
  Studied and examined the feasibility to transfer AD/MCI classifier from one type of population to another, by giving a presentation about a research paper that uses, Graph Convolutional Network to build Cortical Graph Network.
- **Classify fMRI brain scans with dataset of 20 subjects and no domain information**
  Trained 3D Convolutional Neural Network to classify 20 subjects as being Patient or Healthy and acquired a result of 90% accuracy classifying the 10 test subjects.

AWARDS AND EXTRA CURRICULAR

- Elected as the **President** of my Residence Hall in the University of Texas at Arlington, for the academic year 2020-21 and took measures towards the welfare of the hall residents, even in the challenging time of world pandemic of CoViD-19.
- Elected as a **UTA Ambassador** for the term 2020-2021 and increased awareness of UT Arlington's services, programs, and activities to students and the surrounding community and strengthened pride and passion for UT Arlington on and off campus.
- Served in the planning committee of The Big Event and reviewed their organization bylaws.
- Contributed to the development of the **greenery** in Delta 1 sector in Greater Noida, being interested in horticulture, from 2015-2017.
- **First prize** in Fest Photography at JIIT festival, Impression, February 2012 and Converge, February 2013
- **First position** in Creative Programming at JIIT festival, Impression, February 2012.
- **Gold medal** in Swimming and Basketball at High School, 2006