**SHIVAM SINGH**

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**EDUCATION**

**University of Texas,** Arlington - Masters in Computer ScienceAugust 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**

* **Current Subjects**: Neuroimaging Analysis with Computer Vision, Big Data Management and Analysis
* **Language & Framework:** C/C++, Java/J2EE, HTML5+CSS3, Python (tkinter, Flask pandas, TensorFlow, nltk, scikit, NumPy, 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 ManagerOctober 2018 - February 2019 Lead the product prototyping with the cross-functional team responsible for the initial launch. Achieved a huge conversion rate of more than 90% in the first two months.
* **KoinOK,** Delhi (India) — Co-founderSeptember 2017 - September 2018 Helped in building a core team of six members, managed legal and operations aspects from scratch, along with advisors and marketing, all in a budget of less than $10,000.
* **Wibe Labs Private Limited,** Delhi (India)— Software EngineerMay 2015 – February 2017 Gathered system requirements for chrome extension project, targeting e-commerce sites. Also, 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.

**RESEARCH AND PAPER PRESENTATION**

* **Cortical Graph Neural Network for AD and MCI diagnosis and transfer learning across populations**

Demonstrated the feasibility to transfer AD/MCI classifier from one population to the other.

**PROJECTS**

* **Natural Language Processing**
  + **Disaster Tweets** - Built a classifier that detected disaster from given tweets.
  + **BoardGameGeek Reviews** -Given reviews of a game the ratings (out of 10) was determined with RMSE of ±2.5 and launched a flask based weblink to input text and predict score.
* **NEURAL NETWORK FROM SCRATCH**
  + **Simple Perceptron & Linear Associator Neural Network from scratch**

To learn the working of neural network and how it’s implemented on TensorFlow, I built a simple perceptron and linear associator from scratch with code in Object Oriented Programming style, that is similar to TensorFlow Libraries, 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.

Also implemented Multilayer Neural N

* **Built Multilayer Neural Network from scratch to predict MNIST dataset (Deep Learning)**

Structured the data in Object Oriented Programming style, that is similar to TensorFlow Libraries and gradient descent algorithm to predict MNIST dataset.

* **Built Convolutional Neural Network from scratch with CIFAR-100 Dataset (Deep Learning with TensorFlow)**
* **N- Arm Bandit Problem (Reinforcement Learning)**

~~Built elevator scheduling that~~ optimized the position of the elevator to serve people ~~as fast and effectively as possible which change based on the~~ reduced time by 0.5 trend of usage using decay factor.

* **Q-Learning in C program (1-TD | Reinforcement Learning)**

Implement Q-learning algorithm, from scratch, to balance a 3-Dimensional inverted pendulum.

* **Dyna Q Learning and Prioritized Sweeping (Reinforcement Learning)**

Built a grid world simulator where the action to move up, down, left and right was unreliable, and coded a Dyna Q algorithm to each agent to traverse the grid world effectively with minimal cost in simulator by simulating through its imagination of the simulator.

* **Atari Ping-Pong (Deep Q learning | Deep Reinforcement Learning | Experience Replay Buffer)**

Used Deep Q learning with Convolutional Neural Network in TensorFlow to train Atari Ping pong to play and win the game against the computer, with the game image frame as input and “up” and “down” button as output.

* **Implemented k-NN on Iris dataset from scratch**

Coded and implemented 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

Created 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 a lot easier for people to customize their delivery at their ease.

* **Baahan** — Cloud based vehicle registration system

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.

* **CarEase** — smart-mobile operated car bot

The aim was to develop a Smart Car bot, using Arduino, which was fully controlled by an Android Smart Mobile phone, not only controlling the utilities inside the car at great ease but also driving and other functionalities like proximity assistance and other various sensors assisting in safer and easy driving.

* **Joutique** — a boutique of Java tools

Designed various custom and basic Java-based tools (Find and Replace Editor, Content editor, Stream writer, customized JAVA IDE) to help JAVA developers, exploiting Reflection API.

* **My KBC** — My version of Who Wants to Be a Millionaire?

Coded a simulator of Who Wants to Be a Millionaire using JFC/Swing (AWT), long back in 2006.

**CERTIFICATION**

* **Big Data Science and Data Analytics,** Gurugram (India) — CertificationNovember 2016 - February 2017 Received certification from AnalytixLabs, learning Data Manipulation, Statistical and Predictive modelling, HDFS and Spark shell.

**AWARDS AND COMMUNITY SERVICE**

* First position in Creative Programming at JIIT festival, Impression, February 2012.
* First prize in Fest Photography at JIIT festival, Impression, February 2012 and Converge, February 2013
* Gold medal in Swimming and Basketball at High School, 2006
* Elected as the **President** of my Residence Hall in the University of Texas at Arlington and took measures towards the welfare of the hall residents.
* Contributed in the **development of the greenery** in Delta 1 sector in Greater Noida being interested in horticulture from 2015-2017.
* Made with your idea, “It’s the other way around”
* all projects -
* star
  + Eg. MNIST
* Problem statement, solution, result and Impact
* Deep Learning, ML and similar projects.