Vasant Vohra

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Location: New Delhi. India

SOFTWARE ENGINEER

SUMMARY

Software Engineer working on Artificial Intelligence, Machine Learning and Deep Learning Technology through the implementation of multiple projects across various business domains.
Ardent learner, ready to solve challenges by leveraging AI technology for a productive experience throughout. Also, a bright beginner at problem-solving skills in the competitive programming world. Since High School, Python has been my favorite programming language.

EDUCATION

IIT Madras, NPTEL — Online
Deep Learning Certificate, Percentage: 78% — *July. 2018 – October 2018*
Theoretical Course Syllabus:
History of DL | Multilayer Perceptron |Neural Networks, Backpropagation | Gradient Descent and its types |Principal Component Analysis | Autoencoders | Regularizations | Convolutional Neural Networks | Siamese Neural Network | Recurrent Neural Networks | Long Short-Term Memory |

SRM University Delhi - NCR — New Delhi, India
Bachelor of Technology, Computer Science and Engineering; CGPA: 7.87/10.0 — *Aug. 2015 – May 2019*
Relevant Courses:
AI & Expert system, Soft computing, Logic of Computer Science, Data Mining, Data Structure using C, Design and Analysis of Algorithms, OS, DBMS, Compiler Design, Cryptography, Applied Mathematics.

Presidium — New Delhi, India
Central Board of Secondary Education (CBSE) High School; Percentage: 83.2% — *2013 – 2015*
Relevant Course:
Physics, Chemistry, Mathematics, English and Computer Science with Python Prog. Lang.

SKILLS

Artificial Intelligence

Programming Language	Python, PROLOG (Declarative Prog. Lang.)
Image Processing	Python Imaging Library (PIL)
Computer Vision	OpenCV
Natural Language and Processing	SpaCy
Data Analytics	Pandas, NumPy, SciPy
Data Science & ML	Sci-kit learn (Fundamentals)
Deep Learning	TensorFlow, Keras, PyTorch
Development Environment	Jupyter notebook, Python IDE

Web development

Hypertext Markup Language	Cascading Style Sheets
Python	Jinja, Flask, Django

Others

Programming Languages	<C/C++>
Database Management	MySQL, IBM DB2, SQLITE3

WORK EXPERIENCE

AAPNA Infotech Pvt. Ltd — New Delhi, India
Computer Vision Software Engineer — June'19 - Present
About Company: Dynamic Service-based Software Company working on high-end enterprise application development across various technologies.

- Enriching existing IoT team by the power of AI in the latest Deep learning solutions based on Computer Vision.
- Along with the IoT team, I'm working on other service-based AI-related projects.

INTERNSHIPS

AAPNA Infotech Pvt. Ltd — New Delhi, India
Computer Vision Intern — June-Aug 2018

- Understood the basics of *machine learning and computer vision* while developing a live project.
- Automated facial recognition attendance monitoring system in a *python* programming language using OpenCV library and deployed on a *Raspberry Pi 3*.

Think Different Technologies Pvt. Ltd. — New Delhi, India
Android Application Development Intern — June-Aug 2017

- Live Project: 'AfewTaps' An app for restaurant food ordering for both the customers and clients by being physically present at the restaurant and ordering through table number.
- Native app with *Android Studio as IDE and Java* as a programming language.

INDUSTRIAL PROJECTS

Computer Vision + Deep Learning **[Python]** `Open CV + TensorFlow Keras`
Waste Management `Convolution Neural Network`
GitHub | Presentation

- ➔ Multi-Class colored Image classification between different categories of waste such as Biodegradable, Non-biodegradable containing Cardboard, Glass, Metal, Paper, Plastic images from an open-source dataset known as Trashnet.
- ➔ HSV boundary-based color segmentation for automatic counting of colored trash bags. Majorly relied upon OpenCV library & KMeans for different color detection. It could be done better with an Instance Segmentation.
- ➔ Mask R CNN (proposed):
  Automatic detection of dirty and clean areas via segmentation.

Signature Verification **Siamese Neural Network**

- ➔ Built on top of CNN. Also, majorly used in FaceRecognition by FaceNet to determine face embeddings, with a triplet loss function.
- ➔ Employed it for signature verification between the customer's signature on a standardized Residential loan Application.

Warehouse Surveillance **You Only Look Once**

- ➔ DarkNet based python wrapper Dark Flow re-trained for a customized dataset.
- ➔ Also, the ImageAI library for the Warehouse Surveillance and Intrusion Detection on COCO-dataset.
- ➔ Leveraged Singular Invariant Feature Transform for Obstacle detection on Automatic door violations in the warehouse i.e. door should be free from any obstruction.

Facial Recognition based Attendance Monitoring system **HAAR Cascade, LBPH**
GitHub | Presentation

- ➔ Basic OpenCV implementation of Linear Binary Pattern Histogram on HAAR Cascade classifier for detection and recognition of employees.

Information Retrieval **AzureSDK/Camelot Library**

- ➔ Extracting key-value pairs from a complex financial business report's PDF.
  - ➢ **Azure Blob Storage:** Storing PDFs and the dataset for Form Recognizer SAAS.
  - ➢ **Azure Cognitive Services:** Computer Vision OCR + Text Analytics.
  - ➢ **Azure Form Recognizer:** Given the dataset of multiple PDFs along with an empty pdf format, Outputs JSON containing key-value pairs.
  - ➢ Later on, Used **Camelot library** to extract tables as Streams and Lattice to Pandas DataFrame. Further, pushed to Azure SQL DB via SQLAlchemy.

TRAINING

Indian Institute of Science | Bangalore Summer School-2018
Computer Science and Automation Dept.
The summer school consists of lectures on the following fields:

- **Artificial Intelligence**: Deep learning, Reinforcement learning, Big data, Neuroscience.
- Blockchain: Game theory.
- System research, program testing and verification through ALLOY and Dafny
- Quantum computing with Quantum mechanics.

Start-up India, Upgrad |2 months Online
Non-Technical Business Development

- Developed business plans and comprehended various commerce-related terms that are beneficial, to begin with, a start-up.
- Examples: Employment agreements, Term sheets, Investors approach, Marketing strategies, Types of company, Job profiles, etc.

ACADEMIC PROJECTS

Deep Learning **[Python]** **TensorFlow Serving**
MediSigns Web Interface

- ➔ Simple Pneumonia Chest-X Ray Classification by CNN model.
- ➔ Chatbot for Disease Identification by Symptoms matcher.

Azure SAAS Disease Diagnosis chatbot

- ➔ Concludes most likely disease on the basis of Symptoms description via ease of chatting.
- ➔ Azure bot framework based chatbot, rendering machine learning's decision tree on a large knowledge base of diseases with their relevant symptoms.

ADDITIONAL SKILLS

Team Player: built-in leadership qualities makes easy for me to manage work efficiently with colleagues.

- Headed as a project leader for both the major & minor college projects.

Research Oriented: Love Researching about many fascinating innovative Technology.

- Continuously studying latest Deep Learning research papers.

Creative Thinking: Solving Real Life problems through technology.
Problem Solving: Preparing well for competitive programming.

SPOKEN LANGUAGES

English: Proficient German: Elementary Hindi: Native

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