Agastya Seth

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SKILLS

PROGRAMMING

Python and iPython Notebook
R
MATLAB/OCTAVE
C/C++
Verilog HDL
Java
JavaScript (Node.js)

MACHINE LEARNING

TensorFlow
Regression
Support Vector Machines
Naive Bayes
Random Forest
K-Nearest Neighbors
K-Means
Decision Trees
R-CNN
RNN
Time Series

SOFTWARE

RStudio
MATLAB (Simulink)
Jupyter
OpenCV
Visual Studio (C/C++)
Xilinks Vivado (HDL)
Cadence Virtuoso
Arduino IDE
Android Studio
Amazon Web Services
Git and Github

EDUCATION

SHIV NADAR UNIVERSITY

Bachelors in Technology
Electronics and Communication
Cum. GPA: 7.92 / 10.0
August 2016-Present | UP, India

STANFORD UNIVERSITY

Summer Session
Data Science | Technology Entrepreneurship
Cum. GPA: 9.5 / 10.0
June 2018 - August 2018 | Stanford, CA

EXPERIENCE

BISQUARE SYSTEMS | Intern

May 2017 – July 2017 | Noida, UP

- Designed **an ESP8266 WiFi microcontroller based IoT module** to put to use in various IoT solutions.
- Designed a mood-light and IR remote control solutions based on the designed module.
- Created AWS Lambda based backend for the smart light solution for remote control of lights.

SILICON VALLEY INNOVATION ACADEMY

June 2018 – August 2018 | Stanford, CA

- Conceptualized a solution to make consumer product production lifecycle more transparent to achieve SDG Goal #17, using Distributed Ledger Technology (DLT)
- Conceptualized a green-score for consumer products based on their ecological footprint the product development lifecycle.
- Developed a platform for users to track their carbon footprint wrt. their daily consumption (electricity, gas, water, products etc.)

PROJECTS

RNBIP | Single Bus Processor Architecture

August 2017 – Present | Shiv Nadar University, India

- Built an 8-Bit Single Bus Processor Architecture using HDL synthesis, and successfully flashed it on Xilinx Artix FPGA (under the guidance of Dr. R.N. Biswas).
- Currently working on building a microcontroller based on the processor - building a compiler and ports for the same.

WORD PREDICTOR USING RNN | Data Mining Course Project

December 2018 | Shiv Nadar University, India

- Built an RNN model (without libraries) to predict the next set of characters given a set of words as inputs (trained on any given book).
- Visualized the back-propogation in time and loss function wrt. the weights.

SMART DOOR | IoT Course Project

December 2017 | Shiv Nadar University, India

- Built a smart-door solution using a Raspberry Pi to remotely stream live video stream outside the door, and lock/unlock the door.
- Used OpenCV to detect human presence in the video frame to trigger push notification.

DELHI PUBLIC SCHOOL, NOIDA
High School
2016 | Noida, UP | Percentage: 95%

KEY COURSES

UNDERGRADUATE
Analog Electronics
Applied Machine Learning
Communication Networks
Control Systems
Data Structures
Data Mining and Applications
Data Analytics in Societal Applications
Digital Communication
Digital Signal Processing
Embedded Systems Hardware
Intro. to Robotics
Linear Algebra
Machine Learning in R
Mathematical Methods I & II
Optimization I
Probability & Statistics
Semiconductor Devices
Signals and Systems
VLSI Technology and Design

INTERESTS

DLT
Technology Entrepreneurship
Computer Vision
Machine Learning / Deep Learning
Robotics
VR / AR
Human Cognition
EDA
Sustainable Development
Music Composition

LINKS

Github:// **agastyaseth**
LinkedIn:// **agastyaseth**
Twitter:// **@agastya_seth**
SoundCloud:// **agastyaseth**

FACE DETECTION USING EIGENFACES | Linear Algebra Project
May 2017 | Shiv Nadar University, India

- Implemented a face detection model using eigenfaces method.
- In the process, implemented mathematical transforms using Matlab, without libraries.

SEQUENCE-TO-SEQUENCE ABSTRACTIVE TEXT SUMMARIZATION | Personal Project
December 2018

- Implemented a sequence-to-sequence RNN model for abstractive text summarization according to **this paper.**
- Improved the above model by using pointer-generator network in accordance to **this paper.**

ACHIEVEMENTS

GOOGLE SCIENCE FAIR 2014 | Regional Finalist
September 2014 | India

- Built an Android app to empower farmers with real-time crop prices.
- **Idiot-proof UI** to enable illiterate farmers to obtain location-pertinent crop information using TTS in the vernacular language.

MACHINE LEARNING MOOC | Coursera
July 2017 | Stanford University | Total Grade - 96%

TRINITY GUILDHALL LEVEL 6 | Electronic Keyboard
May 2014 | Trinity London

SOCIETIES

ROBOYANTRIKI | Robotics Society
Working Committee | September 2016 - present

- Conducted various intra-university workshops on Arduino, IoT etc.
- Worked on an affordable blind-aid robot using Arduino and various sensors.

SNUPHORIA | Music Society
Member | September 2016 - present

REFERENCES

PROF. R.N. BISWAS | Department of Electrical Engineering
Shiv Nadar University | Contact No: +91 999.042.9045
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MR. RAMENDRA BAONI | Bisquare Systems
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