Arsh Sharma

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EDUCATION

NIT HAMIRPUR

B.Tech + M.Tech in Electronics and Communication
Expected May 2023 | Hamirpur, IND
Cum. GPA:7.85

MOUNT CARMEL SCHOOL

Grad. Mar 2018| Himachal Pradesh, IND
Cum. GPA:10

LINKS

Github:// **Sov-trotter**
LinkedIn:// **sov-trotter**

SKILLS

PROGRAMMING

Julia • Python • C++ • Matlab • Java

TOOLS

Atom • LaTeX• Vim • VisualStudio Code

LIBRARIES

MatPlotLib • Flux • DataFrames(Pandas) • Three.js, • JSON(RPC) • Tensorflow.js • p5.js • Makie • QuantumBFS • Plots

MISCELLANEOUS

Arduino • Processing • Blender • Genetic Algorithms • Microsoft Kinect SDK • Generative Art • Webscraping

EXTRACURRICULARS

• 2020-present Joint Secretay Hult Prize NITH • 2018-present Coordinator Team ISTE
• 2018 - 2019 Animator at Pixonoids

WORK EXPERIENCE

JULIA SEASONS OF CONTRIBUTIONS JSOC'20 May'20 - present

- A GeoSpatial data handling ecosystem for the Julia language
- The project will simplify the GIS pipelines to read and view data in Julia, right from parsing it to a Tabular format and be able to plot it, all withing 4 lines of Julia code!

TECHNICAL WRITER - GEEKSFORGEEKS April'20

- Writing articles on The Julia Language

PROJECTS

A TRNG FOR JULIA AND MATLAB Nov'19

- Wrote a client library that fetches true random numbers from Random.org (It can be now found on Random.org's official website.)
- RANDOM.ORG offers true random numbers to anyone on the Internet. The randomness comes from atmospheric noise, which for many purposes is better than the pseudo-random number algorithms typically used in computer programs.

GPU EMULATOR Oct'19

- A video card made from scratch using IC's

2D RAYCASTER/RAYTRACING ENGINE Sept'19

- Built a minimal 2-D raytracer in js

MOTION CAPTURE USING KINECT April'19

- The first few steps involved interfacing with the Kinect
- The output from kinect was then stored in a .bvh file (OpenNI)
- The .bvh was imported into Blender and appiled on a model's armature thus the model imitated human movment
- In additon to it many objects were 3D scanned and their 3D models created (wavefront .obj format)

3D HUMAN - COMPUTER INTERFACE Dec'18

- A touchless 3D tracking interface
- Placing an object within the electric field of a capacitor affects the capacitance and the corresponding time constant.
- This gave the location of an object in a 3D space. While the Arduino micro-controller fetched values from the 3D space(capacitor), Processing was used to create a visual representation