ISHAN DIGRA

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Education

Degree	Institute	Year	GPA/%
B.Tech in Electrical Engineering	Indian Institute of Technology, Delhi	2019-2023	8.03/10.0
Class XII (CBSE)	Lotus International School, Pathankot	2019	91.2%
Class X (CBSE)	Dalhousie Public School, Badhani	2017	93.1%

Internships

Huawei Technologies, Bangalore : *Software Engineer*   *June 2022 - August 2022*
- Worked on Huawei's Operating System **HarmonyOS** (part of 1+8+N strategy) in Consumer Software Business Line
- Developed **Open Source developer APIs** for collecting feedback from customers to enhance the user experience
- Proposed key **Ideas** in in several domains (UI/UX, AI, Blockchain and smart homes); to be **Implemented globally**

The University of Queensland, Australia : *Prof. Tapan Saha*   *June 2021 - September 2021*
- Achieved **51.9%** improvement in the consumer **Utility** via scheduling load in response to the market conditions
- Proposed noncooperative **Stackelberg game**, formulated between community storage and residential buildings
  *Awarded **Letter of Recommendation** from **Both** Internships for the achievement of publishable results and high productivity*

Key Projects

Dynamic Memory Allocator : *Prof. Rahul Garg*   *October 2020 - November 2020*
- Solved **memory fragmentation** issues via defragmenter that periodically merged free blocks of memory
- Created Doubly Linked List, Binary Search Tree and AVL Tree to implement **first split** and **best-split** fit algorithms

Social Graph Implementation : *Prof. Rijurekha Sen*   *December 2020 - January 2021*
- Implemented **DFS** algorithm to identify independent story lines in marvel from character occurrence data set
- Devised **Merge Sort** to Produce sorted list of marvel characters based on their no. of occurrences in various scenes

Neuron Analysis : *Prof. Saurabh Gandhi*   *August 2022 - Present*
- Applied action potentials measured on electrode arrays to capture cell-specific Morphoelectrical properties
- Implemented **PCA** and **K-means** clustering on extracellular waveform data from mouse brain to classify neurons

E-commerce App Interface : *Self tailored*   *April 2022 - May 2022*
- Created **Neumorphic** design implementing search, filter and add-to-cart features using DevEco Studio

Exoskeleton Fabrication : *Prof. Deepak Joshi*   *August 2022 - Present*
- Designed **Cable-driven** exoskeleton, low-level controller, high-level controller and power transmission setup
- Assessed the severity of **Osteoarthritis** due to age and injuries by implementing a **knee joint** exoskeleton model

Visualizing Data on Google Map : *Prof. Charles Severence*   *May 2020 - June 2020*
- Developed program creating a HTTP socket to transfer encoded raw input address to **Google Geocoding API**
- Used **urllib** to encode user typed raw address and decode returned JSON object to parse useful information

Scholastic Achievements

- **Publication :** Devised **Smart grid** based joint energy storage ownership scheme via dynamic pricing
  - " *Management of Community Storage Space for Providing Demand Flexibility*" (Submitted)   *2022*
- **JEE Mains :** Obtained overall **99.16** percentile among 1.2M candidates   *2019*
- **JEE Advanced :** Secured **97.39** percentile among 2,30,000 shortlisted candidates   *2019*

Technical Skills

Languages : C++, Python, Java | **Software & tools :** MATLAB, DevEco Studio, AutoCAD, LaTeX

Extra-Curricular Activities

Sports Secretary, IIT Delhi : Managed team of **26** captains and vice-captains to achieve new endeavors *2021 - 2022*
Mentor, Board For Student Welfare : Guided 5 freshman acclimate into the new environment   *2021 - Present*
Football Captain, IIT Delhi : Lead a team of **25+** members in the prestigious general championship   *2020 - 2021*
FACC Rep, IIT Delhi : Unanimously selected to develop and promote **fine arts and crafts** culture at IIT *2020 - 2021*
Cultural Endeavors : First -Wall Painting competition'19 | Core team member, Uphoria'21 | Coordinator, Josh'22
Sports Endeavors : First -Football, Interschool'16 | **Second** -Football, Interhostel'19 | **Fourth** -Basketball, Interhostel'19