


# SHREYAS GUPTA

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## EDUCATION

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**International Institute Of Information Technology, Bangalore (IIIT Bangalore)** *Aug 2016 – Aug 2021*

Integrated Masters in Technology

Specialised in Signal Processing and Pattern Recognition

## PROJECTS

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### **Analysis of menstrual cycle tracking amongst Indian women**

Conducted a qualitative research study to understand cycle tracking and menstrual hygiene methods adopted by Indian women. Organised an inspiration card workshop and developed multiple prototypes based on interviews and outcomes of the workshop.

### **Understanding non-use of technology amongst Indian families (Ongoing)**

An ongoing research project to understand non-use of mobile phones by people from different generations in Indian families, to better design digital wellbeing solutions. This is a qualitative study focusing on the role of age, specifically generational gap in non-use.

### **Human-Machine Interfacing**

Developed an experimental framework for human computer interaction using just muscular contractions. The EMG signal processing unit will acquire minute voltage differences between our muscle layers caused by flexing, process it and let user give input to a machine.

### **Vanilla CNN framework in python**

Developed a CNN framework from scratch with architectural components like convolution, pooling, upsampling and fully-connected layers, optimised for parallel processing.

### **British English Dialects Classification**

Developed a robust dialect classification pipeline for British English dialects using MFSC coefficients, kalman filters and temporal derivative features.

### **Image Processing Toolkit**

Developed an image processing toolkit for .ppm format images in C++. Contains optimised solutions for scaling, cropping, clipping, Histogram generation, various image segmentation methods and more.

## TECHNICAL STRENGTHS

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<b>HCI</b>	Qualitative Research Methods, Lo-Fi and Hi-Fi Prototyping Usability Testing, Ethnographic studies
<b>Machine Learning</b>	Data Mining, Data Analysis, Neural Networks, Data Visualisation
<b>Software &amp; Tools</b>	Python, Pytorch, Sketch, Javascript, C/C++, Swift, SQL
<b>Other</b>	Team Management, Public Speaking

## WORK EXPERIENCE

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**GE Healthcare, Bangalore**

May 2019 – July 2019

*Data Science Intern*

- Designed and developed a remaining useful life (RUL) prediction pipeline for medical equipment asset recovery using data-driven prognostic analysis.
- Identified trends and patterns in the services aftermarket using methods like sensor-based conditioning and feature extraction, denoising etc.
- Used a combination of Autoregressive (AR) model built using Python, and a modified Partitioning Around Medoids (PAM) clustering algorithm built using R, for RUL prediction.
- The pipeline helped in cutting maintenance costs for clients, increase services revenue and refurbished unit sales, and reduced net equipment downtime for customers.
- Patent approved under GE Healthcare.

**LexHeal, Bangalore**

June 2018 – April 2019

*UX Researcher, Product Designer*

- Designed a platform for patients and doctors to seamlessly share medical information with each other for efficient diagnosis and improved clinical visit experience.
- Conducted semi-structured interviews and workshops to better understand the parenting needs of Indian families.
- Created prototypes for an application to monitor physiological and psychological development of infants and toddlers.

**TEDxIIITBangalore**

Nov 2017 – Aug 2019

*Primary Licensee, Organiser*

- Designed, planned and executed the first TEDx event in IIIT Bangalore.
- Created a community of students, professors and industry experts for collaborating and sharing ideas.

**ACADEMIC ACHIEVEMENTS**

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2nd Runner up at GE Healthcare Precision Challenge 2018. Won Rs. 50k and secured an internship.

Placed in top 5% worldwide in HILTI IT Competition, Malaysia 2019.

Amongst top 5 Designers selected for Zomato UX Teardown project.

Got selected for Udacity Secure and private AI Scholarship 2019, being issued by Facebook AI.