

## EDUCATION

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**B.E. Computer Engineering** **University of Mumbai** **Aug 2018 - June 2022**  
• Coursework: Advanced Algorithms, Operating System, Computer Networks, Big Data Analytics, Object-Oriented Programming, Discrete Math, Artificial Intelligence and Soft Computing, Machine Learning, Data Structures. **CGPA: 9.34/10**  
*VESIT Literature Circle* (Head of Quiz) | *CodeCell Committee* (P.R. and Outreach Head) | *Google Developer Student Club* (Sr. Member)

## EXPERIENCE

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**Teaching Assistant** **University of California, Santa Cruz** **Sept 2022 - Present**  
*Worked under Dr. Larissa Munishkina, Professor*  
• Assisted the professor in the course CSE 30: Abstractions in Python with handing discussion sessions, quizzes, assignments and grading  
• Covered concepts such as data structures, functional and dynamic programming and basics of some advanced topic like ML, AI or SAT  
*Python, Shell Scripting, SSH, Teaching*

**Research Assistant** **University of Wisconsin, Madison** **Feb 2021 - Jan 2022**  
*Worked under Dr. Ishita Chakraborty, Assistant Professor*  
• Scraped and analyzed tweets from various brand handles to understand how a brand conveys **empathy** by developing novel ML model  
• Proposed **EmpBACON** - a new novel **interpretable** architecture to quantify empathy with an accuracy of **86.5%** on the **testing dataset**  
*Python, Tensorflow, Sci-kit learn, huggingface, Tweepy, Latex*

**Software Intern** **Newland Taiwan Co.** **Dec 2020 - Feb 2021**  
*Worked under Mr. J.P. Mishra, Sales Director Newland India*  
• Assisted in **Product Management** and Pre-Sales of the data capturing devices such as mobile terminals and scanners to regional clients  
• Examined the implementation and development of handheld terminals (MT90/UR90) equipped with **RFID** / **Barcode** scanning systems

## PROJECTS

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**Avertio Labs** **Oct 2020 - Present**  
*A fast and quick response to workplace accidents (GGS | UNLEASH Plus Global Incubator | COINS Grand Challenge)*  
• Developed & **patented** an IoT based **fall detection device/system** for workers in danger prone industries such as construction, mining  
• The device used on board motion sensors and microprocessor to detect falls when worn by user by implementing machine learning  
• Carried out pilot testing at **3** construction sites / **30+** devices with **50%** reduction in latency in receiving medical aid to injured person  
*Raspberry Pi, IoT, ML, Python, SAAS*

**Privacy - Preserving AI for GDPR Compliance** **July 2021 - May 2022**  
*Facilitating private data sharing by implementing secure algorithms (Final Year Project)*  
• Researched **authorized data sharing** amongst subsidiaries and associates while maintaining training transparency amongst the user  
• Used privacy preserving methods such as **Federated Learning**, **Homomorphism** and **Differential Privacy** for training various models  
• Implemented a **differentially private model** scaling its training and deployment with the help of federated learning and ML models  
*ML, Python, Tensorflow, Sci-kit learn*

**Artificial Intelligence Model for Epidemiology of TB** **Sep 2020 - Jun 2021**  
*AI model to predict time and location of next TB Epidemic in India (TBA Grant | IEEE ICHI 2021 | NatCon 2020)*  
• ML Project for **Tuberculosis** prediction by correlating data with weather data to learn disease migration patterns and **epidemiology**  
• Collaborated with **National Elimination Program** and **Skymet** services to use real time data to train data of near 10 million individuals taken from the last decade for creating precise prediction mode based on comorbidities like Age, HIV, Gender and Smoking Habits  
• Used **Convolutional Neural Networks** to compute the number of Pediatric, Geriatric, HIV comorbidities with **r2 score of 92.23%**  
*Python, Tensorflow, Sci-kit learn, Tableau, Latex*

## ACCOMPLISHMENTS

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- Invited as part of the team Avertio Labs to present at the **Global Grad Show (GGS)** exhibition at Dubai for cash prizes worth 25K USD
  - Recruited as the part of the **UNLEASHplus Global Incubator 2022** program for enabling meaningful change for the SDG's set by the UN
  - Received the **Short Term Research Project Grant** from Government of India - **Tuberculosis Association of India (TBA)** division in 2020
  - Achieved **First Runner Up** position at the **COINS Grand Challenge 2021**, UK for developing a solution to reduce accidents at workplace

## VOLUNTEER WORK

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**Nostos Homes** **Sep 2020 - Dec 2021**  
• First-of-its-kind **sustainable emergency shelter** for people fleeing from violence or displaced due to natural disasters around the globe  
• Provided **data driven reports** for tracking displacement of villagers in rural India by using the **Facebook Data for Good** platform