Vidya G

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EDUCATION

Year	Degree / Certificate	Institute / Board	CGPA/Percentage
2021	B.Tech	Vellore Institute of Technology	8.4
2017	Senior secondary	Karnataka PUE	89.6(PCME)
2015	Secondary	CBSE board	8.6

EXPERIENCE

- **R&D Intern at ERICSSON INDIA, Chennai** *July 2020 - present*
  - Multiagent Reinforcement Learning with dynamic goals for 5G bandwidth slicing. (have experience in customizing environments)
  - Developed a multi-student knowledge distillation framework which compress the ML models to upto 80% for edge devices.
  (Secured Global Rank 2 at the ITU AI/ML in 5G Challenge.)
  - Developed disentangled ML models with a novel loss function to reduce the inference time by learning the most important features.
  - Developed a novel indoor localization technique using camera communication.

- **Remote Research Associate - MORSE STUDIO** *April 2020 - present*

  Developed a non-intrusive web-application for human psychoanalysis using graphology that identifies potential mental disorders and learning disabilities. (Prospective NIH proposal)

- **FLSmidth Pvt Ltd, Chennai** *May 2019 - July 2019*

  Design and Program for Cement Mill and Raw Material using ECS
  SCADA and PLC (Siemens step7)

RESEARCH ACTIVITIES

- **Graphology using Computer Vision (**Submitted to IEEE Transaction in Mobile Computing, 2021) *Oct 2020*
  - Handwriting Analysis for Depression and Dyslexia using computer vision and natural language processing.

- **Multi-context aware knowledge distillation** (Submitted to ITU JFET 2021) *Aug 2020*
  - Selected by ITU AI/ML in 5G challenge- AI for social good summit, 2020.

- **Anomaly Detection in Drone-Captured Images Using Machine Learning Techniques and Deep Learning Architectures** *Sept 2020*
  - **Best paper award**, Virtual International Conference on Futuristic Communication and Network technologies (VICFCNT2020)

- **Anomaly Detection in Drones with Machine Learning Algorithms** *Sept 2020*
  - Published with Springer by VICFCNT2020.

PROJECTS

https://www.vidyaganesh.com/#Projects

- **Multiclass classification of cardiac arrhythmia** *Jan 2020*
  - Arrhythmia classification using the UCI Machine learning repository's arrhythmia dataset.

- **Gesture Vocalizer for the deaf/mute** *Dec 2019*
  - A microcontroller-based system to convert hand gestures into speech for easy understanding of expressions for the disabled.

- **IoT in Hydroponics for fodder** *Oct 2019*
  - IoT based automated hydroponic system using temperature, pH, EC and moisture sensors.

- **Smart Walking Cane for the blind** *Aug 2019*
  - A low cost and light weight system with enhanced features by embedding utilities like obstacle avoidance.

- **Future of smart buildings** *Mar 2019*
  - A DL model that provides the framework to make real time intelligent decisions using IoT and home automation.

- **Audio transmission through visible light** *Mar 2019*
  - Wireless optical transmission of sound wave using Li-fi with earphone jack or input from an arduino.

- **Real time temperature monitoring and telegram alerts** *Jan 2019*
  - Monitors and also predicts temperature in real time and alerts user through telegram.

ACHEIVEMENTS

- Secured **Global Rank 2** in the ITU AI/ML Challenge for the research on deep learning model compression
  using knowledge Distillation. *Dec 2020*
- National Finalist-India **GGITC Schneider Electrics** -Designed a DL model that provides the framework to make
  real-time intelligent decisions using IoT in home automation. *Aug 2019*
- Received **Google Cloud Platform Research Grant** worth **$5000** for the proposal of our research on Handwriting
  Analysis for Depression and Dyslexia. *Aug 2020*
- Runner up in the 24Hours Make-A-Thon for designing an onchip circuit using Mach Zehnder Interferometer
  on Lumerical, VIT Chennai. *Mar 2020*
- Secured regional 3rd in Elocution organized by the **Airport Authority of India** -South Indian Region during
  the Vigilance Awareness week. *Oct 2018*

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, Java
- **Data Analysis:** NumPy, Scikit-Learn, Pandas, Keras, Tensor Flow, Pytorch, Cuda
- **Software:** MATLAB and SIMULINK, Keil uVision, Proteus, Siemens step7, ECSSCADA, Cadence, NS2, PSpice.
- **Hardware:** Arduino, Raspberry pi, LPC11U24
- **Miscellaneous:** Adobe Photoshop, Illustrator

POSITIONS OF RESPONSIBILITY

- Treasurer | Board Member of the IEEE Computer Society, VIT Chennai *(2018-19).*
- Head of design, IEEE Women in Engineering, VIT Chennai *(2018).*
- Vice Executive Director- HackHub2019, IEEE Computer Society, VIT Chennai *(2019)*

EXTRACURRICULARS

- **COMSNETS 2020 & 2021:** Volunteered at a premier International Conference dedicated to advances in Networking and Communications Systems.

- **AI4Good Simulator:** Assisting on building a simulator using agent based models ad compartmental models to model COVID19 outbreaks in refugee camps to offer timely interventions.

- Secured 2nd place in a 14km cycle Marathon during the National Level sports festival of VIT Chennai, **VIBRANCE2018**

- Emerging Student Volunteer Award 2018, **IEEE Student Branch**, VIT Chennai

- **VITeach** (Social outreach club) - School Team coordinator and volunteer for ENVISION 2019 (Hosted by NFB-National Federation of the Blind of India and COGNIZANT)

- Partnership Lead at **Renaissance 2018** which provides a platform for the growing entrepreneurial mindset within students, VIT Chennai.

KEY COURSES UNDERTAKEN

- Data Structures and Algorithms | Object Oriented Programming | Algorithm Toolbox
- Essentials of Machine Learning | IoT and ML -Bolt | Open Source tools for Data science
- Embedded Systems | Microcontrollers | Aerial Robotics | Computer Communication

INTEREST AND HOBBIES

- Graphic Design using Adobe Photoshop and Illustrator
- Pencil Sketching