



Vidya G

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B.Tech – ECE

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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. (developed custom environments resembling the 5G use case with gym, PyMARL and RLlib frameworks)
 - Developed disentangled DL models with a novel loss function to produce highly uncorrelated feature space, reducing the inference time significantly by learning only the essential features. [\[GitHub\]](#)
 - Developed a novel indoor localization technique to enhance indoor Li-Fi technology 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) [\[Web-App\]](#)
- **FLSmidth Pvt Ltd, Chennai** May 2019 - July 2019

Designed and Programmed Cement Mill operation and Raw Material Handling using ECS SCADA and PLC (Siemens step7)

JOURNAL

- Yashavini Vishwanath, **Vidya G**, Sethuraman TV, Savina Singala, Ashwin Ashok, “Human Psychological report generation using Automated Graphology” Prospective submission to *IEEE Transactions in Mobile Computing* 2021.

CONFERENCE PUBLICATIONS

- Thrivikram, **Vidya G**, Sethuraman TV, Satheesh K.Perepu. “Efficient Knowledge Distillation of Teacher Model to Multiple Student Models” Accepted at *IAICT 2021*.
- Kartik Joshi, **Vidya G**, Soumya Shaw, Abitha K Thyagarajan, Akhil Pathak, Rahul Hemal Shah, Ram Kishan V, and John Sahaya Rani Alex. “Anomaly Detection in Drones with Machine Learning Algorithms”. Published *Virtual International Conference on Futuristic Communication and Networktechnologies (VICFCNT2020)*
- Soumya Shaw, Kartik Joshi, Abitha K, Akhil Pathak, **Vidya G**, Rahul Hemal Shah, Ram Kishan V, and John Sahaya Rani Alex. “Anomaly Detection in Drone-Captured Images using Machine Learning Techniques and Deep Learning Architectures”. Published *Virtual International Conference on Futuristic Communication and Networktechnologies (VICFCNT2020)* **[Best paper award]**

PROJECT

[\[PROJECTS\]](#)

- **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

International

- Secured **Global Rank 2** in the ITU AI/ML Challenge for the research on deep learning model compression using knowledge Distillation. *Dec 2020*
- Received **Google Cloud Platform Research Grant** worth **\$5000** for the proposal of our research on Handwriting Analysis for Depression and Dyslexia. *Aug 2020*

Domestic

- National Finalist-India **GGITC Schneider Electric** -Designed a DL model that provides the framework to make real-time intelligent decisions using IoT in home automation. *Aug 2019*
- 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*

OPENSOURCE CONTRIBUTION

- AI for Good Simulator:** Working with a group of tech-enthusiasts to build a COVID-19 Simulator for refugee camps using epidemiological modelling. [\[link\]](#)
- Stack overflow:** Top 10% of the contributors in stack overflow in the year 2021 (so far) impacting over 25000 people. [\[link\]](#)

TECHNICAL SKILLS

- Programming Languages:** C++, Python, Java
- RL Frameworks:** Open AI Gym, Rllib, PyMarl
- Data Analysis:** NumPy, Scikit-Learn, Pandas, Keras, Tensor Flow, Pytorch, Cuda
- Cloud Tools:** Google Cloud Platform, IBM cloud
- Developer Tools:** Docker, Git, VSC
- Software:** R, MATLAB and SIMULINK, Keil uVision, Proteus, Siemens step7, ECS SCADA, Cadence, NS2, PSpice.
- Hardware:** Arduino, Raspberry pi, LPC1114
- 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. [\[link\]](#)
- AI4Good Simulator:** Assisting on building a simulator using agent-based models' and 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
- VITeath** (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