PROFILE

I am a budding Electrical and Electronics engineer. I am interested in doing projects in **IoT**, **Sensors and Wearables, Bio-medical Image Processing, WebDev**, **ML**, **DL**, **Artificial Intelligence** and **Power Systems and Renewables**.

CONTACT

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SOFTWARE

- **Programming Languages**: C, C++, Python, JavaScript, Java, MATLAB, Octave
- **Web Development**: HTML, CSS, Angular, ReactJS, Node.js, MongoDB, PHP, NoSQL, Google Firebase
- **Engineering Software**: Arduino Genuino, TinkerCAD, FactoryIO, Android Studio
- **Machine Learning**: TensorFlow, Jupyter, Keras, Pandas, Numpy, OpenCV

MOOCS

- **Internet of Things**: How did we get here?, **Communication Technologies**, **Multimedia Technologies**, Setting Up Your DragonBoard™ Development Platform, Sensing and Actuation From Devices, Setting up and Using **Cloud Services** (**University of California, San Diego**)
- Introduction to the **Internet of Things** and **Embedded Systems**, The **Arduino Platform** and **C Programming**,

RAKSHAA VISWANATHAN

EDUCATION

- **National Institute of Technology, Tiruchirappalli**
  2018 - 2022
  B. Tech in Electrical and Electronics Engineering
  Minor in Computer Science and Engineering
  CGPA- 8.59
- **Chettinad Vidyashram, Chennai**
  AISSCE 2018: 95.8%
- **The PSBB Millennium School, Gerugambakkam, Chennai**
  AISSE 2016: CGPA- 10

RELATED COURSEWORK

- **Core and Elective Courses:** Analog Electronic Circuits, Digital Electronics, Electron Devices, Basics of Electrical Engineering, Networks and Linear Systems, Circuit Theory, AC Machines, DC Machines and Transformers, Transmission and Distribution of Electrical Engineering, Industrial Automation, Electrical Safety.
- **Lab Courses:** Electronic Circuits Laboratory, Devices and Circuits Laboratory, Synchronous and Induction Machines Laboratory, DC Machines and Transformers Laboratory.
- **Minor Courses:** Computer Organization.
- **Institute Requirements:** Basics of Mechanical Engineering, Basics of Civil Engineering, Physics (I and II), Chemistry (I and II), Mathematics (I, II, Transforms and Partial Differential Equations, and Numerical Methods for Electrical Engineers), Basics of Programming, Professional Communication, English for Communication, Engineering Graphics, Engineering Practice.
- **Courses in Progress:** Linear Integrated Circuits, Control Systems, Power Systems Analysis, Data Structures and Algorithms, Utilization of Electrical Energy, Big Data Analytics, Database Management Systems, Power Systems Laboratory, Linear Integrated Circuits Laboratory.

WORK EXPERIENCE/ PROJECTS

Low Voltage DC Pico-grid for Hospital Electrification- Dr Arul Daniel, Professor (HAG), National Institute of Technology, Trichy:
(Dec 2019–Present)
This project aims at designing a stand-alone, **off grid PV pico-grid** that will provide enough power to sustain a primary healthcare centre which has no access to grid. A report is being prepared with an intent to publish it as an **IEEE journal paper.**

PERSONAL PROJECTS

- **30 Days of ML** *(Oct 2020- Nov 2020)*
  A collection of 16 mini projects done with Jupyter Notebook that conceptualizes Neural Networks, Computer Vision, Data Analysis, Classification, Regression and Unsupervised Learning.

- **Web Development** *(May 2020- Present)*
  - Project OSHA- One Stop Heathcare Application built with React.js, echoAR, Node.js, Firebase, Python, and Figma. This project won the prize for the best **echoAR API Project** in **QuantaHacks 2021.**
  - #UoCC A CoVID Consciousness App- An app to engage young people to take COVID seriously. We wanted to think beyond public-health messaging while targeting the youth

Interfacing with the Arduino (University of California, Irvine)
- Industrial IoT on Google Cloud Platform (**Google Cloud**)s
- **Machine Learning** (Stanford University)
- **Deep Learning Specialization, AI for everyone** and **Introduction to TensorFlow** for Artificial Intelligence, Machine Learning, and Deep Learning (**deeplearning.ai**)
- Getting Started with **AWS Machine Learning** (**Amazon**)
- **Intel Network Academy**- Network Transformation 101 (**Intel**)
- Introduction to OpenCL on FPGAs (**Intel**)
- Control of Mobile Robots (**Georgia Institute of Technology**)
- Introduction to **Self-Driving Cars** (**University of Toronto**)
- **Electric Power Systems** (University at Buffalo, The State University of New York)
- Technical Support Fundamentals, The Bits and Bytes of **Computer Networking**, Operating Systems and You: Becoming a Power User, Crash Course in Python (**Google**)

population separately for effective messaging. This project won **The Wolfram Award** Sponsored by Wolfram Language in **TechTogether Seattle 2021.**
  - Right or Left- A chrome extension that detects and informs whether the article is biased left or right.
  - iSign- A web-application that enables translation from ASL (American Sign Language) to English.
  - New-Year-New-Expenses- An expenses tracking app built with React.js, Node.js, Firebase, Express.js.
  - Christmas for Everyone- A charity locator app made with React.js and Axios.

- **Bots against Discrimination** *(Jan 2021- Feb 2021)*
  Built SafeSpaceBot and NoRasicm bots with Python and discord.py libraries.
- **Robotics** *(Aug 2018- Sept 2018)*
  Robotics projects based on Computer Vision and Python Image Processing were made.
  - Gesture Control Robotics: A robot that can be navigated with hand gestures was built. This was performed using Arduino Nano, Open CV and Python Image Processing.
  - Shadow Arm: A robot that can reproduce whatever image was shown on the webcam was built. This was performed using Arduino Uno, Open CV and Python Image Processing.

EDUCATIONAL ACHIEVEMENTS

- Winner of the best **echoAR API Project** at **Quantahacks** 2021.
- Winner of the **Wolfram Award** at **TechTogether Seattle** 2021.
- Winner of the **Popular Choice Hack** at **Hack Solistice** 2021.
- Accepted and Participated in over 25 hackathons.
- Accepted into **Machine Learning Scholarship Program** for **Microsoft Azure**.
- Received **Hackerrank Certification** in C++, Python and JavaScript.
- Stood among the **top 0.6% of CBSE** students in AISSCE 2018.
- Qualified for **Regional Mathematics Olympiad** in 2017.
- Achieved **High Distinction** in **Australian National Chemistry Quiz** (ANCQ), 2016.
- Received **Certificate of Merit** for **outstanding performance** from CBSE in 2016 for AISSE.
- Achieved **zonal rank 7** and **international rank 63** in the **National Cyber Olympiad** 2017.

EXTRA-CURRICULAR AND CO-CURRICULAR ACTIVITIES

- **Mentor,** Rewriting the Code – an organization supports and empowers college, graduate and early career women in tech to become the next generation of engineers and tech leaders.
- **Mentor,** Major League Hacking – an organization that operates a league for student hackathons.
- **Deputy Manager,** Media Relations, Pragyan- the Techno-Managerial Organization of NIT Trichy.
- **Content Writer,** Currents- the annual symposium of the Electrical and Electronics Department, NIT Trichy.
- Part of **Dance Troupe** of NIT Trichy.
- Attended the **International Women's Day** summit (IWD 2020) conducted by **Women Tech Makers, Google**.

VOLUNTEERING ACTIVITIES

- **Mentored** various hackathons including TechTogether Seattle, Hacklytics, Hacklohoma, Hackatown, MacHacks and uOttaHack.
- **Volunteer**, National Power Electronics Conference (**NPEC**) 2019.
- **Volunteer**, National Service Scheme, NIT Trichy.