

# UNNIKRISHNAN MENON

Electrical and Electronics Undergrad

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## WORK EXPERIENCE

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02/2019 – Present

**Technical Head of Electrical Department**  
roboVITics, the official robotics club of VIT

07/2018 – Present

**High Power Circuit Developer, Team Orcus**

*The team designed a 120 lbs combat robot that has performed well in international Robo Wars*

### Achievements

- Finished in top 7 internationally at RoboWars, TechFest'1, IIT Bombay
- Secured third position in RoboWars, Kurukshetra'19, Anna University

12/2017 – 02/2019

**Core-Committee Member**

roboVITics, the official robotics club of VIT

- Successfully completed multiple robotics projects involving Machine Learning, Computer Vision, Artificial Intelligence, IoT etc.

## EDUCATION

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02/2017 – Present

**B.Tech in Electrical and Electronics Engineering**

Vellore Institute of Technology, Vellore

Current CGPA (3 semesters): 8.62

**Class 12 Board Examination (CBSE): 94.2%**

Summer Fields School, New Delhi

**Class 10 Board Examination (CBSE): 10 CGPA**

Summer Fields School, New Delhi

## SKILLS

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Machine Learning, Artificial Intelligence, Cryptography, Astrophysics, Python, Competitive Coding, Combat Robotics, Electronics, Internet of Things, Robotics, C/C++, Java, Golang, MATLAB, Computer Vision, Back-end Development, Socket Programming

## ACHIEVEMENTS

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02/2019

**Winner of Developer's Sprint of Code Hackathon by CodeChef**

*Secured the First Position in this 36 hour Hackathon. I worked on the hardware and a facial emotion recognizer for an electoral system that eliminates majority of the problems in the existing system*

09/2019

**Winner of VIT Hack 2019 by Honeywell**

*Secured First position in VITHack'19 organized by VIT University in collaboration with Honeywell*

**6 Near Earth Object Observations (All India Asteroid Search Campaign)**

*I used a software called Astrometrica to detect potential celestial objects and I ended up spotting 6 Near Earth Objects (NEO's)*

01/2018 – Present

**Quora Top Writer 2018**

*Got the coveted Top Writer's Quill on my Quora profile for writing quality technical content. Got New York Time's subscription and a t-shirt as a reward from Quora*

## PERSONAL PROJECTS

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02/2018 – 04/2018

### **Autonomous Rubik's Cube Solver**

- Developed an algorithm in under 800 lines of C++ code that predicts the correct moves to solve a scrambled  $3 \times 3 \times 3$  Rubik's Cube.

08/2019 – Present

### **Riff-Raff Encryption (Patent-Pending)**

- Decimal (Negative/Positive, Unranged) Encryption for Unbreakable, Impenetrable Security.

09/2019 – 10/2019

### **Path Prediction for Smart Vehicles**

- A Path Prediction Algorithm which forecasts future path taken using RNN-LSTMs and on top of that optimizes the predicted trajectory using Deep Q-Learning Algorithm.

12/2018 – 02/2019

### **Self Learning Crawler**

- This bot combines the Q Learning algorithm with a robotic arm to come up with an optimum policy for moving forward

02/2019 – 02/2019

### **Comprehensive Electoral Solution Suite**

- Secured First Position in DEVSOC'19

10/2018 – Present

### **AI Development for Video Games**

- Deployed genetic algorithms and other advanced reinforcement learning algorithms in various Video Game environments like Super Mario, Pacman, Snakes, Flappy Birds etc.

01/2019 – 02/2019

### **Prepaid Energy Credits based Power Distribution System**

- Machine learning based algorithm for predicting power usage in a common household.

05/2019 – 12/2019

### **RSA Encrypted Online Password Storage**

- This code can be used to save your passwords or other confidential data remotely to a server with a layer of RSA encryption (coded from scratch) without any worries of it getting hacked.

05/2018 – 06/2018

### **TensorFlow Chatbot**

- An RNN and LSTM based Chatbot that responds well to meaningful queries.

## REFERENCES

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**Awnon Bhowmik, College Laboratory Technician**

Department of Mathematics

Borough of Manhattan Community College

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