

# UNNIKRISHNAN R. MENON

✉ [menon.uk1998@gmail.com](mailto:menon.uk1998@gmail.com)

☎ +91 – 8376048185

🐙 [github.com/7enTropy7](https://github.com/7enTropy7)

📍 VIT University, Vellore, Tamil Nadu – 632014

🌐 [linkedin.com/in/unnikrishnan-menon-aa013415a](https://www.linkedin.com/in/unnikrishnan-menon-aa013415a)

🗣 [quora.com/profile/Unnikrishnan-Menon-5](https://www.quora.com/profile/Unnikrishnan-Menon-5)

## Education

**B.Tech in Electrical and Electronics Engineering**  
Vellore Institute of Technology, Vellore  
Current CGPA (6 semesters): 8.40

02/2017 – Present

**Class 12 Board Examination (CBSE): 94.2%**  
Summer Fields School, New Delhi

2017

**Class 10 Board Examination (CBSE): 10 CGPA**  
Summer Fields School, New Delhi

2015

## Research Interests

- Cryptography
- Artificial Intelligence
- Quantum Computing
- Computer Vision
- Reinforcement Learning
- Astrophysics
- Socket Programming
- Genetic Algorithms

## Technical Skills

- **Microcontroller** – Arduino, Raspberry Pi, 8051 Assembler, Nexys4 DDR Artix-7 FPGA, NVIDIA Jetson Nano
- **Programming Languages** – Python, C/C++, Java, Javascript, Assembly, Verilog, CUDA
- **Mathematical Packages** – MATLAB, R
- **Typesetting Software** – L<sup>A</sup>T<sub>E</sub>X
- **Other** – TensorFlow, Keras, OpenAI Gym, NumPy, Qiskit

## Publications

1. Bhowmik, A. and Menon, U. (2020c). Mes – modern encryption standard. *International Journal of Computer Applications*, 176(36):21–27
2. Bhowmik, A. and Menon, U. (2020a). Dragon crypto – an innovative cryptosystem. *International Journal of Computer Applications*, 176(29):37–41
3. Bhowmik, A. and Menon, U. (2020b). Enhancing the ntru cryptosystem. *International Journal of Computer Applications*, 176(29):46–53

## Extracurricular

### Technical Advisory Board

roboVITics, the official robotics club of VIT

02/2020 – Present

### Technical Head of Electrical Department

roboVITics, the official robotics club of VIT

02/2019 – 02/2020

### High Power Circuit Designer

Team Orcus,

*Designed a 120 lbs combat robot that has performed well in international RoboWars.*

07/2018 – 01/2020

- Finished in top 7 internationally at RoboWars, TechFest'18, IIT Bombay
- Secured third position in RoboWars, Kurukshetra'19, Anna University

### Core-Committee Member

roboVITics, the official robotics club of VIT

12/2017 – 02/2019

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

## Achievements

### Winner of HackerTech 2019

*Secured First Position in this 24 hr long Hackathon where I worked on project SPARC (Smart Power Allocation using Reinforced Clusters).*

12/2019

### Winner of VIT Hack 2019

*Won VITHack organized by VIT University in collaboration with Honeywell*

09/2019

### Access Denied Hackathon 2019

*Got Special Mention price in Logistics and Transportation from GitHub.*

03/2019

### 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*

02/2019

### 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*

01/2018

### 6 NEO Observations (All India Asteroid Search Campaign)

*Used Astrometrica to detect potential celestial objects and ended up spotting 6 Near Earth Objects.*

2016

## Personal Projects

03/2020 – 04/2020

### Self learning Quadruped

- Augmented Random Search Algorithm based AI that teaches a robotic quadruped to walk.

01/2020 – 02/2020

### Sudoku Vision

- An application that can detect sudoku puzzles placed in front of a camera and solves them in real time automatically.

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.

08/2019 – Present

### **Riff–Raff Encryption**

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

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

05/2019 – 12/2019

### **RSA Encrypted Password Online 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.

02/2019 – 02/2019

### **Comprehensive Electoral Solution Suite**

- Secured First Position in DEVSOC'19

01/2019 – 02/2019

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

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

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.

05/2018 – 06/2018

### **TensorFlow ChatBot**

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

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.

## **References**

**Awnon Bhowmik, College Laboratory Technician**

Department of Mathematics

CUNY Borough of Manhattan Community College

+1 (929) 462 8832, [abhowmik@bmcc.cuny.edu](mailto:abhowmik@bmcc.cuny.edu)