

UNNIKRISHNAN R. MENON

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🗣 [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^AT_EX
- **Other** – TensorFlow, Keras, OpenAI Gym, NumPy, Qiskit

Publications

1. Bhowmik, A. and Menon, U. (2020a). Dragon crypto – an innovative cryptosystem. *International Journal of Computer Applications*, 176(29):37–41
2. 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

12/2017 – 02/2019

roboVITics, the official robotics club of VIT

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

Achievements

Winner of HackerTech 2019

12/2019

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

Winner of VIT Hack 2019

09/2019

Won VITHack organized by VIT University in collaboration with Honeywell

Access Denied Hackathon 2019

03/2019

Got Special Mention price in Logistics and Transportation from GitHub.

Winner of Developer's Sprint of Code Hackathon by CodeChef

02/2019

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

Quora Top Writer 2018

01/2018

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

6 NEO Observations (All India Asteroid Search Campaign)

2016

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

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

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