

## GIRISH KUMAR KANNAN

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### SUMMARY

An M.S.Cp.E graduate with 3 years of professional computer engineering experience and a wide range of technical skills in the field of Machine Learning, Data Science and Automation. Excels at Python Programming, Data Processing / Analysis / Visualization. Critical thinker and a problem solver. Pays great attention to details. Versatile and hardworking, passionate towards contributing to a team to accelerate outcomes and goals. Takes personal responsibility and accountable to assigned tasks. Motivated towards developing and deploying quality technologies, systems and processes.

### WORK EXPERIENCE

**Robotacist / Robotics Engineer, Quartile 3 Robotics, Miami Beach, Florida, USA.** **Nov 2018 – Present**

- Developed a program that will help take Restaurant orders using Speech Synthesis and Facial Recognition in Python. Automated data interaction and exchange between local and a cloud database server.
- Designed & developed GUIs using Python to actuate a Humanoid Robot by a Remote User, controlled through intranet & internet. Generated APIs to handle quality data-flow between the robot and the user through an online cloud SQL database.
- Developed API that can interact with SQL databases using Python to interface a GPS RTK device. Decoded, interpreted and reformatted incoming binary data. Transformed the data for exporting to a database.

**Computer Engineer Intern, Parsound LLC, Orlando, Florida, USA.** **Aug 2018 – Jan 2019**

- Designed and developed advanced DSP algorithms, signal communication strategy and device communication topologies.
- Collaborated across disciplines to make user-friendly amplifier control systems, effectively automating smart soundscapes.
- Developed a program in Python to handle automatic data exchange between a software and a data file. Collected, reorganized, transformed and exported the data file to be imported directly into the software. Handled data errors and corrections.
- Lead engineering teams of up to 10 people, conducted interviews and made important decisions.

**DSP Engineer (Volunteer-Associate), Parseval LLC, Orlando, Florida, USA.** **May 2017 – April 2018**

- Developed a project that saves trapped lives in a vehicle endangered by unsafe temperatures. Designed electronic circuit boards and programmed the devices using Python and C/C++.
- Designed and programmed automated microphone stand to perceive soundscape of a room using Matlab and C/C++.
- Built, maintained and patched computers and cables, installed and fixed operating systems & set up complex development environments to support development team.

### TECHNICAL SKILLS

- Operating Systems: Windows (10+ years), Linux (3+ years - Ubuntu, Raspbian, Debian distros.)
- Programming Languages: Python (NumPy, SciPy, Pandas, Matplotlib, Seaborn), MATLAB, C, C++, SQL, [ R, Java, HTML ]
- Applications: Microsoft Office Suite / 365, Libre Office Suite

### EDUCATION

**University of Central Florida, Orlando, Florida, USA.** **August 2016 – May 2018**

**Master of Science in Computer Engineering** **CGPA: 3.5 / 4.0**

Related Coursework: Advanced A.I., Machine Learning, Intelligent Systems, Computer Vision, Signal Processing.

Related Projects:

- Occupancy Grid-based 2D-SLAM Robot: Deployed A-Star Search and Reinforcement Learning techniques to navigate a robot that can Simultaneously Localize and Map a quasi-stochastic region using Occupancy Grid model using Python, C/C++ and Matlab.
- Multi-Detection Computer Vision : Developed a set of Computer Vision algorithms to make a webcam detect hand gestures as mouse commands and perform Optical Character Recognition as well, on a real-time basis using Python.
- Programmed and compared Machine Learning algorithms to datasets to understand the efficiency of every algorithm – performed profiling, extraction, pruning, transformation and visualization with Python libraries on every dataset used to produce results.
- Designed and demonstrated various Signal Filtering and Processing techniques to analyze the efficiency of each design – observed incoming data, smoothed and corrected defects and generated statistics on the incoming data stream.

**SRM University, Chennai, Tamil Nadu, India.** **August 2011 – May 2015**

**Bachelor of Technology in Mechatronics** **CGPA: 8.9 / 10.0**

Related Projects:

- Autonomous Robot Swarm for Goal Searching: Designed an Arduino-based three-agent swarm that uses Alpha-Beta Coordination Algorithm using C/C++ for Goal Searching and Convergence for applications like search and rescue and resource foraging.
- Gesture Controlled Mouse: Designed an Arduino-based Wireless Gesture-controlled Mouse using Digital IMU to aid people with limb-disabilities. Built and programmed an interface that translated hand gestures to cursor actions on a computer using C/C++.