Muraleekrishna G

Student

17 Phillipa Weeks Street, Watson, Canberra 2602

+61 468467963 | muraleekrishnagc@gmail.com | gmuraleekrishna | gmuraleekrishna | MuraleekrishnaG

Education

College of Engineering and Computer Science

The Australian National University, Australia

Master of Engineering *2018–2019*

Mechatronics

Federal Institute of Science and Technology (FISAT)

7.49 GPA

B.Tech *2010–2014* — *Mahatma Gandhi University, India*

Electronics and Communication Engineering

Rajagiri Higher Secondary School

92.7%

Higher Secondary *2008–2010* — *DHSE, Kerala, India*

Computer Science and Mathematics

Carmel Higher Secondary School

97.5%

SSLC *2008* — *SCERT, Kerala, India*

Mathematics, Physics and Chemistry

Professional Experience

Software Engineer - TDD, Ruby, Cordova, Java, Angular, HTML5, CSS3, Postgres

April 2017– September 2017

Aconex — *Bangalore, India*

- Supervise and adapt new technology into the existing projects.
- Monitor and practice XP and Agile software development process to assure quality of the software.
- Understand business requirements through direct interactions with stakeholders.
- Architect, develop, deploy and maintain software products for web and mobile platforms.
- Improve software engineering processes and uphold Agile and XP values.

Software Consultant - TDD, Ruby, Cordova, Angular, HTML5, CSS3, Postgres

April 2015– April 2017

Aconex — *Bangalore, India*

- Develop web app for construction project managers.
- Develop hybrid mobile app using Cordova and AngularJS for field inspectors.
- Use TDD to drive, test and document code.
- Run retros, Stand-ups and Scrum meetings.
- Contributing to the quality software which helps people to collaborate on the world's largest construction projects.
- Maintain CQRS based micro-services.
- Build and design new REST APIs for third party consumers.

Software Programmer / Full stack developer - Ruby on Rails, JavaScript, React, HTML5, CSS3, MongoDB, Postgres

July 2014 – March 2017

Multunus Software Pvt. Ltd. — *Bangalore, India*

- Worked with non profit Fintech company to optimize their loan closing, servicing and undertaking using software.
- Developed an intelligent recommendation system for VakilSearch to help their customers find the right legal service.
- Lead developer in an internal application to improve employee well-being.
- Understand business requirements through direct interactions with customers, users and product owners.
- Design, develop, test and maintain software products across various domains and deliver working software every 2 days .
- Develop high quality software through Agile and XP practices.
- Help devise, implement and improve software engineering processes.
- Interview and hire developers. Improve the hiring processes.
- Train and mentor new recruits and improve training process.

Core Skills

C/C++, Ruby, JavaScript, Python, MATLAB

Programming Languages

Linux, OSX, Windows

Operating Systems

Tensorflow, Matlab, Ruby on Rails, JQuery, Angular, Postgres, Emacs, PyQt

Software and Platforms

Welfare Experience

Australian National University *Canberra, Australia*

Course Representative *Feb 2018 - Current*

- Collect and collate student feedback about the course content, work load and teaching methods.
- Voice student concerns to the relevant authorities
- Provide assistance and advocacy to students.
- Communicate the outcomes of meetings with course conveners to students.

Make A Difference (MAD) *Kerala, India*

Student support fellow *July 2013 - Jan 2014*

- Teach students of economically backward community studying in 10th or equivalent classes.
- Deliver physics and chemistry classes to students every weekends at their welfare center.
- Provide assistance and advocacy to improve social and psychological functioning of children and their families.
- Counsel bashful students to overcome their social anxieties.

Honors & Awards

2017	**Completed**, Robotics Specialization by University of Pennsylvania	*Coursera*
2017	**Hackathon Best project**, Winner: Drone based smart site inspections (Intelispect)	*Aconex India*
2017	**Completed with 82.8%.**, Control of Mobile Robots: Georgia Institute of Technology	*Coursera*
2017	**Completed with 90.4%.**, Image and Video Processing: Duke University	*Coursera*
2017	**Completed with 100%.**, Robotics: Capstone: University of Pennsylvania	*Coursera*
2009	**Winner with A Grade**, Sub-District Mathematics Exhibition	*Kerala, India*
2009	**Winner**, District Basketball Championship	*Kerala, India*
2010	**Winner**, Best Photographer of FISAT	*Kerala, India*
2008	**Award for high achieving student in the sub-district**, SSLC examinations	*Kerala, India*

Memberships and Positions

2017	**Member**, Robotics and Automation Society	*IEEE*
2012–2014	**Research Intern**, Center for High Performance Computing (CHPC)	*FISAT, India*
2013–2014	**Student Support member & Trainer**, Spoken Tutorial Project	*IIT Bombay*
2013–2014	**Organizer**, FISAT Science Congress	*FISAT, India*
2013–2014	**Secretary**, ECHO, Electronics and Communication Department Club	*FISAT, India*
2011–2014	**Teacher**, Physics and Mathematics	*Make A Difference*

Academic Projects

Semantic Scene labeling for road scene images

Computer vision and Convolutional Neural Networks

Guide: Dr. HongDong Li *May 2018*

Road scene labeling is a method of identifying objects in a road image captured by autonomous car camera and safely traverse the car through them. Along with other sensors in the driverless car (LIDAR, Sonar etc) this approach can improve the vehicle safety. In this project we presented an improved method of identifying objects in a road scene and labeling them based on the classes it belong to. The segmentation task used SegNet (V. Badrinarayanan et al.), an encoder-decoder based convolutional neural network, to classify and locate the objects and label them as one of 11 different object classes (road, sky, car, etc). We used KITTI dataset to train and test the neural network.

Autonomous Car

Computer Vision and Motion Planning

Guide: Dr. S Krishna Kumar *Sep 2013*

The goal of this project was to develop an autonomous electric vehicle capable of driving on urban style roads. The system is built around ROS, an open source robot operating system. Two real-time solutions are implemented; a reactive prototype using sensors and actuators and a more complex deliberative approach using a sense-plan-act architecture. The detected obstacles are used to manoeuvre between them and GPS data is used to compute shortest distance to the next milestone. The vehicle is able to reliably navigate the test track around the college campus

Multi-layered Display Using Water Drops

Computer Vision and Image processing

Guide: Prof. Bejoy Varghese *Jan 2013*

Water drops are transparent and serve as tiny fish-eye lenses. In this work, we have created a high-resolution, multi-layer (2.5d) drop display that can show images and videos. Our system consists of a single projector-camera system and a set of linear drop generator manifolds that are tightly synchronized and controlled using a computer. Our prototype system has up to four layers, with each layer consisting of an row of 50 drops that can be generated at up to 60 Hz. We showed how this water drop display can be used for text, videos, and interactive games

Additional Projects

Swarm robots

Control of unaware homogeneous centralized robotic swarm and Path Planning *Mar 2013*

A collective multi robot system which was designed to learn to incorporate swarm behavior in simple robots. A fixed master unit was used to coordinate the movements of 3 slave units. Each slave identified themselves using a specific LED color. The master placed at physically elevated position locates each robot unit and sends appropriate commands to each of them to carry out the formation. I case of collision, slave nodes intimates the master which then re-routes the slave nodes accordingly.

PingoLux

Computer Vision *Jun 2012*

This is a projection keyboard that can be used to project the keyboard onto different surfaces irrespective of the shape and texture. The user presses the projected image of the key in order to register a key-press. The system detects the key press using an IR camera which identifies the location of the blob created due to the reflection of IR beam on the surface.

References

Mr. Divin Paul *MYOB Australia*

Senior Programmer *+61-413961232*

Mr. Akshay S. Murthy *Multunus Software Pvt. Ltd*

Senior Programmer *asmurthy@aconex.com*

Dr. S Krishna Kumar *FISAT*

Professor, Electronics and Communication Engineering *s_krishnakumar@fisat.ac.in*

Mr. Bejoy Varghese *FISAT*

Assistant Professor, Electronics and Communication Engineering *bejoyvarghese@fisat.ac.in*