

KARTHIK THIRUGNANA SURIYAN

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SKILLS & ABILITIES

Programming languages: Python, C#, Android, Core Java, Java EE, JavaScript, HTML, CSS, ASP .NET, XML, Shell Scripting

Tools & Framework: Linux, JIRA, GIT, Jenkins, Twister, wxPython, OTree, Test Link, Enovia, Clear Case, Tensor Flow

Persistence: MySQL, MS SQL Server, PostgreSQL, Redis, Firebase

EDUCATION

Master of Technology, Software Engineering

Institute of Systems Science

National University of Singapore

Graduation: April 2018

CAP: 4.09/5.0

Honors (Distinction)

Bachelor of Engineering, Electronics and Instrumentation

Sri Sai Ram Engineering College

Anna University, Chennai

Graduation: May 2014

CAP: 8.78/10.0

University Rank: 14

Coursera, Machine Learning (Andrew Ng)

<https://www.coursera.org/account/accomplishments/verify/NU5ZWN8JLR89>

EXPERIENCE

Full Stack Developer Intern

Temasek Polytechnic

August 2017 - Present

- Online Bursary Application System
 - ASP .NET web application, MVC4, HTML, CSS, JavaScript Module Design, jQuery, MS SQL Server
 - Developed online web application for students to apply for bursary and intranet web application for staff to do assessment of the application and system to auto match the bursary scheme based on the assessment
 - Developed console application and triggered batch jobs for sending emails about activity reminders to students
 - Worked on ZProxy for security scanning of web application
 - Worked on JMeter for performance testing of both internet and intranet applications
 - Use of Spec Flow tool for agile Behavioral Driven Development
 - Followed Agile Scrum methodology for software development

Junior Research Assistant

(Part Time)

Singapore ETH Centre,

CREATE, NUS

October 2017 – Present

- Economic Decision-Making games integrated with Human Like Chatbot for research purpose
 - Python, OTree framework, NodeJS, HTML, JavaScript, PostgreSQL, Redis
 - Developed various decision-making games for behavioral and economic research among people using Python OTree framework, PostgreSQL database and Redis in-memory data structure store.
 - Integrated human like chatbot with the game to analyze human mentality based on chat messages.

Project Engineer

Wipro Technologies Limited

December 2014 – June 2016

➤ Warrior Framework and Tools development

- Python, wxPython, GIT, Jenkins, JIRA, Automated Testing, Twister, XML, Test Link
- Developed keyword driven automated testing framework - Warrior that takes in XML test cases and suites
- Developed Sickie, a tool that takes in manual test cases from Test Link and relevant automated test cases from GIT executes using Warrior framework and updates results back to the Test Link
- Worked on the transition of Goldmine, a data mining tool from shell scripting to python that is used by higher level management for monitoring progress
- Developed Quick Automation Tool that develops automated test cases in python from manual test cases
- Developed Warrior Test Case Creator, a tool that develops XML test cases for Warrior from manual test cases

ACADEMIC PROJECTS

- **Autonomous Drone** – Built an autonomous drone that can fly on its own if we set way points on the map. Used to take pictures of large objects and send back the images to mobile station in real time that is used for 3D scan. Drone integrated with ultrasonic sensors for obstacle detection and indoor navigation. Developed a custom **Android application** that acts as a **mobile station for the drone**. Unlike conventional methods like WIFI, Radio Telemetry, drone can be controlled by 4G LTE networks for extended coverage
- **Phoenix Radio Management System Application** – Developed front end android application where the radio station manager can manage the operations and developed back end as RESTful service using Java EE, MySQL
- **Singapore Airlines App Challenge** – Developed an android application for the cabin defects management system
- **Vending Machine Control System** – Applied **object-oriented design patterns** to already provided brute force code
- **Movie Recommendation System** – Developed a **python-based machine learning** model using clusters that recommends top five movies based on the certain criteria
- **Human Activity Detection** – Developed a fusion model by applying **Convolution Neural Network, Naive Bayes** classification algorithms using **tensor flow, python** that detects activity based on the accelerometer data, Kinect RGB, skeletal data
- **MediPal Application** – Developed an **Android application** that keeps track of patient health and reminds them to take medicines
- **Amazing Race** – Developed an **ASP .NET MVC application using Entity Framework** that allows admin to manage the race also see real time contestant information on screen using **SignalR**
- **Smart Cap for the Blind** – Developed a smart cap using **raspberry pi** that takes picture and explains the details in real time to blind people
- **Programmable Logic Controller based Control Protection and Interlocking of Dust Suppression System Compressor** – An industrial project at Neyveli Lignite Corporation Limited for monitoring air pressure, overload current, compressor temperature, minimum voltage, cooling fan operation. Programmed using Zen Support Software, a ladder logic program
- **Security Lock using Bluetooth control** – An electronic lock using **Arduino, ATMEGA micro controllers** that operates on password logic from mobile using Bluetooth
- **Line Follower Bot** – Developed a simple line follower bot using **Arduino, ATMEGA micro controllers, DC motors** etc.

PROFILE LINKS

- **GitHub** – <https://github.com/kartisuri>
 - **LinkedIn** – <https://www.linkedin.com/in/karthik-thirugnana-suriyan-94470a103/>
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