# Rakshith Churchagundi Amarnath

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## SKILLS

**Tools**: Visual Studio, Microsoft Azure, MATLAB, Anaconda Python, R-studio, Git, JIRA, Photoshop
**Languages**: Java, JavaScript, Python, R, C/C++, C#, SQL, Assembly Level, HTML/CSS, XML
**Data Base:** MySQL, MongoDB

## EDUCATION

**ILLINOIS INSTITUTE OF TECHNOLOGY** *Master's in Computer Science (GPA – 3.2)* *Chicago, IL (Aug 2018 -May 2020)*
**Courses:** Computer Vision, Artificial Intelligence – Planning and Control, Data Mining, Design and Analysis of Algorithms, Mobile Application Development, Enterprise web Applications, Biometrics, Software Project Management.

**RAJEEV INSTITUTE OF TECHNOLOGY** *B.S in Computer science (GPA-3.6)* *Hassan, IN (Aug 2012- May 2018)*

## EXPERIENCE

**BMW TECHNOLOGY CORPORATION -** *Software Engineer Intern* *Chicago, IL (Jun 2019 -Aug 2019)*

- Built Web Apps based on ASP .Net Core
- Worked on Microsoft Service Fabric, Microservices and GDPR Modules
- Designed Master Pages Utilizing Server controls and CSS
- Wrote Single Page Applications using RESTFUL Web Services plus Angular JS
- Responsible for implementing the client-side validations using jQuery and JavaScript

**ILLINOIS INSTITUTE OF TECHNOLOGY -** *Student Assistant, On-Campus Photographer* *Chicago, IL (Jan 2019 - May 2019)*

- Performed administrative duties relating to students' programs.
- Design, Setup and maintain webpages for registration for new students.
- Was recruited as an official on-campus photographer and managed college's social media account
- Interacted with Local/International students through phone and email addressing their questions and concerns.

**CAMPUS CONNECT TECHNOLOGIES -** *Software Engineer Intern* *Bangalore, IN (Sept 2016 – Apr 2017)*

- Collaborate within an Agile team structure where we developed Web apps using JavaScript.
- Development with cross-browser/cross-device compatibility in a graded browser support environment.
- Python development using Django, applying analytics and building strategies for further enhancing the product.

## PROJECTS

**Implementation of Kernel Function Based on Ramanujan Sums for Computer Vision to Pulmonary Disease**
Developed an image kernel using OpenCV, Keras libraries using python. A third-order kernel matrix for edge detection is an image processor that recognizes whether the image inputted have pulmonary disease based on the model trained and a graph plotted using OpenCV functions.

**Artificial Intelligence - Connect Five Game Playing**
Developed an AI Player that uses the Minimax algorithm with an evaluation function played on an 8x9 grid. Implemented Alpha Beta pruning by modifying the Minimax object into an Alpha-Beta object. Introduced a form of dynamic search depth, searching deeper under some positions than the opponent. Finally ran tests by playing it interactively against the other simple AI player systems provided.

**Real-Time Auto-completion Widget for Linux Terminal**
We introduced the "Real-Time Auto-Completion Widget" alongside the existing bash terminal. Two new features in real-time have been presented: Double Press Tab (generating possible completion words) and Man Pages. This widget displays the completion of commands in the set of 24 possibilities, and man pages on a scrollable window in two cases: when a command is completed on a terminal or when a button on the widget is clicked. Introduced a 'lock' button with which one can save the state of the widget and refer to this state while working in the terminal.

**Yuva-Brigade Android Application**
Developed an android application and launched in Play Store for a youth organization using android SDK which lets us see all the events conducted across India and users can see pictures and photos uploaded according to its locations.

**Open GL - Animation of Flying Paper Planes**
The purpose of the project is to illustrate how we can make this concept into a visualized graphics and make it as an entertainment thing. Here, I graphically demonstrate the flying paper planes simulation using OpenGL as an Application Programming Interface with Microsoft Visual C++ as a platform.

## PUBLISHED RESEARCH PAPERS

- The machine learning application for diagnosis for the respiratory disease through pulmonary function test data [LINK]
- An Optimal Machine Learning approach for Fault Coverage Improvement on Silicon Through Functional cases [LINK]
- Serialization and Deserialization of Python Objects using Pickle and cPickle Modules and their Performance Comparison[LINK]
- Web Browser Application-Test Automation Using Selenium Web driver with Junit Framework [LINK]
- Strategy for Testing Healthcare Applications on Blockchain Technologies [LINK]
- Software Product Line Architecture for Web-Based Applications [LINK]