**KARTHIK MP**

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**Education**

# BMS College of Engineering, Bengaluru, India Aug’16 - pursuing

**Bachelor of Engineering, Computer Science Engineering CGPA: 8.74/10**

**Sri Chaitanya Techno School, Bengaluru, India May’14 - Mar’16 Higher Secondary School Certificate Exam, 12th** (Central Board of Secondary Education) **Percentage: 92.2%**

**The Presidency Public School, Tumkur, India Jun’10 - Mar’12 Secondary School Certificate Exam, 10th** (Indian Certificate of Secondary Education)

# Percentage: 92.33%

**Professional and Research Experience**

**MathWorks, Inc. ,Bengaluru, India**

**Associate Quality Engineer Jan’19 - Present**

* Working on multiple qualification related tasks with the Internationalization team involving filesystem APIs’ and file permission APIs’
* Working with the Platform Qualification team based in USA with qualifying MathWorks’ product suites on new Operating System and Compiler releases/updates.

# Associate in Engineering Development Group Jul’18 - Dec’18

* Worked on developing performance benchmarks for filesystem APIs used by MATLAB and evaluating and improved the performance of these APIs with earlier releases.
* Solved technical issues faced by MathWorks customers & gaining knowledge of MathWorks’ product suites.
* A key member of a cross-culture team comprising of peers from India & US.

# Juniper Networks, Bengaluru, India Jan’18 - Jun’18 Software Engineering Intern

* Developed a workflow to reduce the number of bugs being propagated from development to testing, for a new feature.
* Mapped existing codebase to system test scripts, ran them as part of a developer’s UT workflow and documented the steps.

# Pricewaterhouse Coopers (PwC), Bengaluru, India May’17 - Jul’17 Intern in Advisory

* Performed research activities related to Artificial Intelligence, built chatbot prototypes and deployed them on various platforms such as Facebook Messenger.
* The Chatbot prototype helps customers to have delightful and natural conversational experiences with the digital assistant. It helps to reach more audiences with integrations on various platforms.
* Developed a web-based interface that allows users to view/edit conversations and region wise customer engagement.

# Center for Cloud Computing & Big Data, PES University, Bengaluru, India Jun’16 - May’18 Researcher

* Developed a probabilistic real-time host-based intrusion detection system for applications running in Docker Containers.
* The system gave an accuracy between 87-97% for standard system call University of New Mexico datasets.
* A paper on this project has been published (Refer Publications section).

**Academic Projects**

# Analysis of fuzzing frameworks Jan’17 - May’17

* Performed a comprehensive analysis of the working of fuzzing frameworks such as American Fuzzy Lop(AFL), Peach and Sully.
* Tested the capabilities of these frameworks on the LibreSSL library, Vulnserver and PC Man’s FTP Server respectively.

# IPL (Indian Premier League) Cricket match prediction model Aug’16 - Dec’16

* Designed a model to predict the results of an IPL cricket match.
* The model was found to predict the results with an accuracy between 75-90%.

# Vegetable price prediction model Aug’16 - Dec’16

* Designed a multiple linear regression model to predict prices of vegetables & fruits in the city of Bangalore, considering factors like temperature and humidity, diesel prices of the transportation vehicles, inflation rate and seasonality.
* The model was found to predict a 75% accurate price for beans, 55% accurate price for tomato and 67% accurate price for grapes.

# Optimization of TSP Aug’15 - Dec’15

* Worked in a team to optimize the traveling salesman problem for a given list of cities and distances using the nearest neighbor and two opt algorithms.
* An interactive GUI was designed to display the final graph of all the cities and the optimal route taken. Implemented using the Java Swing and AWT libraries.

**Achievements**

* Recipient of distinction awards for all semesters at PES University.
* Recipient of Prof. CNR Rao Merit Scholarship in 2016 and 2017 for being amongst the top 15% of the students in PES University.
* Won the 2nd place in Maverick@Engineering School program organized by Deloitte India under Collegiate Cyber Threat Competition track.
* An active participant in hackathons and Capture the Flag contests.

**Technical Skills**

# Programming Languages: C, C++,Java, Python, Unix Programming, Javascript,PHP,SQL Software and Platforms: MATLAB, Simulink, Hadoop, Docker, Google Benchmark, Robot

**Research Interests**

* Cloud Security ■ Application Security ■ Information Assurance
* Privacy ■ Applications of Machine Learning on Security

**Publications**

Akshay Kumar, Siddharth Srinivasan, Manik Mahajan, Dinkar Sitaram and Sanchika Gupta (2018) **"Probabilistic Real-Time Intrusion Detection System for Docker Containers"**.In: Proceedings of Sixth International Symposium on Security in Computing & Communications(SSCC),Springer(Conference Paper)

**Academic Courses**

* Data Structures and Algorithms ■ Computer Networks and Network Security ■ Cloud Computing
* Big Data ■ Machine Learning ■ Unix Programming ■ Operating Systems ■ Web Technologies
* Introduction to Business

**Co-Curricular Activities**

* Member of my college’s Collegiate Social Responsibility (CSR) club involved in community service. Organized blood donation camps and taught Math and Science to children studying in a village government school
* Member of Null, an Open Security community.
* Enjoy reading blogs by Daniel Miessler, Krebs on Security and Symantec Blogs

**Personal Details**

* Date of Birth: 16 January 1999
* Hobbies: Reading, Watching and playing Cricket
* Languages: English, Telugu and Kannada