

Pramod Bukkapatna Sathyanarayana

2068, Sobha Sunscape, Sobha Hillview, Uttarahalli Manavarthakaval, Bangalore

✉ pramodbs1003@gmail.com

EDUCATION

National Institute of Technology Karnataka

Surathkal

Bachelor of Technology in Computer Science and Engineering

July 2015 - May 2019

- Secured Cumulative GPA of 9.11 on a scale of 10.0

EXPERIENCE

Samsung Research Institute

Bangalore, India

Software Engineer

June 2019 - Present

- 5G L2 MAC Scheduler Development and Support
 - Designed and Implemented 5G L2 MAC Scheduler Communication Protocols : Channel State Information Reference Signal, Tracking Reference Signal, Downlink Massive MIMO Scheduling, Downlink Link Adaptation, Uplink Link Adaptation, Beamformed Calibration
 - Supported Integration testing, Block testing and Capacity testing for 5G L2 MAC Scheduler features
- 5G L2 MAC Scheduler Design and Optimization Team
 - Involved in Code Optimization, Architecture Redesign activities to reduce CPU cycles in 5G AU, DU and support higher number of UEs per TTI

Samsung Networks: Samsung Digital City

Suwon, South Korea

Software Engineer

October - November 2019, February 2020

- IODT Support for 5G L2 MAC Scheduler features
 - Identified and fixed several bugs in 5G L2 MAC scheduler code identified during field testing

Samsung Research Institute

Bangalore, India

Software Development Intern

May - July 2018

- Bixby robot Project, Natural Language Understanding Team, Voice Intelligence Division
 - Developed a sign language recognition system based on hand gestures using Open-CV and Tensorflow to convert a live video feed into suitable textual information using Convolutional Neural Networks
 - Achieved over 80% accuracy on a custom dataset of ~2000 hand images of diverse skin colors per gesture

Applied Cognitive Science Lab: Indian Institute of Technology Mandi

Mandi, India

Research Intern

May - July 2017

- D.R.D.O Sponsored Research Project to determine efficient ways to train defence forces.
 - Developed manned and unmanned versions of a Submarine training Simulation with a custom designed Game AI controlling several Non-Player Characters and simulating varying difficulty levels, for Google Cardboard Virtual Reality and Windows Desktop platforms using Unity-3D. These simulations were tried out and appreciated by India's Chief of Defence Staff General Bipin Rawat at a Defence Expo
 - Significant data logged from the simulation used to model decision making under varying circumstances
- Landslide Detection Project funded by H.P.S.C.S.T.E, State Government of Himachal Pradesh
 - Developed an Android Application which alerts users in landslide prone areas in Mandi district based on data gathered by sensors to relocate to safer areas (using Google Places API).

PROJECTS

Attempted to prove an Open Problem on Graph Coloring

April 2019

- Attempted to prove a hypothesis that every properly coloured graph G contains an induced colourful path on $\chi(G)$ vertices when $3 < \text{girth}(G) < \chi(G)$ by reading several related papers on graph coloring
- Tested various lemmas leading to the proof using *networkx* for better visualization of graph coloring.
- Implemented a parallel graph coloring algorithm using CUDA to get faster results.

- Developed a Hybrid Scheduling Algorithm for processes in Cloud** *March 2019*
- Simplifying TEACUP set-up using Docker Containers** *November 2017*
 - o Involved in the initial work in an ongoing project to simplify procedure to set-up TEACUP (an automated framework to setup a testbed for real time experimentation of TCP) by using Docker containers
- Implemented Parallel K-Means Clustering Algorithm using CUDA** *November 2017*
- Implemented Process Scheduler in Operating System Simulator** *March 2017*
 - o Implemented several process scheduling algorithms in the OS simulator for Android and Windows platforms.

PUBLICATIONS

- o Rao, A. K., B. S., Pramod, Chandra, S., & Dutt, V. (2018, July). Influence of indirect vision and virtual reality training under varying manned and unmanned interfaces in a complex search-and-shoot simulation. 9th AHFE International Conference 2018, Orlando, Florida, USA.

ACHIEVEMENTS AND CERTIFICATES

- NTSE National Level Scholarship** *2013 - 2019*
 - o Awarded Scholarship by Government of India for the Period of Education upto PhD in India
- NTSE National Level Scholarship** *2013 - 2019*
 - o Awarded Scholarship by Government of India for the Period of Education upto PhD in India
- College Tuition Fee Waiver at NITK, awarded by MHRD, Government of India** *2015 - 2019*
 - o Awarded tuition fee scholarship for securing All India Rank of 1537 in JEE Mains 2015.
- Arun V Hegde Memorial Cash Prize at NITK** *April 2019*
- Completed GIAN Course on Software Based Networks at NITK** *December 2017*
 - o Course conducted by Dr. K.K. Ramakrishnan and Dr. Mohit Tahiliani, sponsored by MHRD, Govt. of India
- Completed GIAN Course on Algorithmic Foundations for WSN at NITK** *December 2017*
 - o Course conducted by Dr. Sajal Das and Dr. Pushparaj Shetty, sponsored by MHRD, Govt. of India
- Applied CS with Android certification by Google, NITK** *November 2016*
- Secured 1st Position in Marathon at Engineer 2016, NITK** *October 2016*
- Secured 9th rank out of 200,000 candidates in KCET 2015 State Entrance Exam** *May 2015*
- CBSE Certificate of Merit in Matriculation Examination** *July 2013*
 - o Awarded for being among the top 0.1 percentage of students in the CBSE National AISSE.
- Participated in KVS JNNSE National Science Exhibition 2013, Kolkata** *January 2013*
 - o Secured 2nd position in State-level KVS Science Exhibition for Automated Vertical Lift Bridge project.

SKILLS AND INTERESTS

Languages:	C, C++, C#, Java, Python, SQL, JavaScript
Technologies:	MongoDB, AWS, Django, CUDA, Android, Tensorflow, Docker, Unity-3D
Research Interests:	Database Systems, Data Science, Distributed Computing

Extra Curricular Activities

- o Volunteered for Notebook donation and Tree plantation drives at Samsung SEVA, SRIB
- o Helped train underprivileged students at JNV, Mudipu as a member of NGO Avanti, NITK Chapter
- o Activities : Reading, Travelling, Quizzing, Trekking
- o Subjects : Economics, History, Social Science, Political Science
- o Sports : Table-Tennis, Volleyball, Badminton, Football