Prateek Kumar

1230 W29 St LA CA 90007 | (213) 245-8953 | p2401kumar@gmail.com | LinkedIn | GitHub | Website

EDUCATION

Master of Science in Computer Science   **January 2021-December 2022**
University of Southern California   3.5/4
Bachelor of Technology in Computer Science   **August 2013-May 2017**
IIT Dhanbad   8.75/10

SKILLS

- **Languages**: C, C++, JAVA, Kotlin, Python, MATLAB, MySQL, HTML, CSS, JavaScript, PHP
- **Technical**: Android, Linux, GIT, Perforce, OpenGL, RTSP, Keras
- **Certifications**: Neural Nets, Aggressive performance improvement strategies, TensorFlow

WORK EXPERIENCE

Senior Software Engineer, Samsung Research and Development   **June 2017–December 2020**

- Notification Framework: Created Samsung Smartthings Notifications module. Module facilitated users obtain alerts from smart device. Was bestowed SAMSUNG SPOT AWARD.
- Researched on Ways to decrease APK size. Improved App-rating from 3.8 to 4.5 by addressing Voice of customer about application high space consumption. Worked with a research team to draft a paper containing Novel methods to reduce Memory Footprint of any Android APK, results of which are used across Samsung. Was awarded SAMSUNG CITIZEN AWARD.
- RTSP/RTP plug-in. Improved an existing Android plugin to supports 1-Server (RTSP)-Multiple-Client and Synchronized RTSP streams, opposed to native Android supporting 1-server-1-client. Was Awarded SAMSUNG SPOT AWARD.
- Contextual Widget: Led team of interns that prototyped and developed framework to make Notification smart by taking help from IOT context and suggests IOT actions. Feature is now Live on Samsung S21. Augmented brand value for Samsung Mobiles. Was conferred SAMSUNG SPOT AWARD.
- Smartthings Continuity Recommendation: Led a team to develop module which provides seamless Multimedia experience when entering or exiting IOT environment. Resulted in Augmentation of brand value for Samsung Phones.

Web-developer, IIT-Dhanbad   **May 2016–July 2016**

- Venue Booking Module: Created Venue Booking Web based Application to book a venue within IIT campus, and provides a workflow for approval, with payment gateways. Helped companies visiting college to pre-book venues. Coordinated with different College departments to simplify and unify different manual venue booking process into one simple Application.

ACADEMIC PROJECTS

Word recognition based on Neural Nets   **January 2017**

- Speech recognition on systems with limited processing power, for instance, Arduino.

Matrox   **June 2014**

- A 2d robotic arm was fed two dimensional vectors to place chess pieces around a chess board. Magnetic sensors were used to determine chess movements made by human player.

Checkers Game   **Jan 2021**

- Crafted a checkers agent which can look ahead 10 steps in time and take actions

PAPERS

- Paper presentation for Android Lint Tool optimization – proposed an optimized algorithm to reduce Android application size, by finding dead code and unused resources, that takes about 30% less time than classic Lint tool. Paper is in review.

PATENTS

- PATENT: Produced an IOT patent on Automated position and latch locking control mechanism using mobile apps 2016
- PATENT GRADE – A1: intelligent Room Identification in IOT Environment using Device Type Watermarks (2020).

HONORS AND AWARDS

- Samsung SPOT Award: for work on IOT client app Smartthings (2017).
- Samsung SPOT Award: RTSP streaming framework, enhanced it for maximum number streams and min latency (2018)
- Samsung SPOT Award: For works on Contextual Widget, which helped increase brand value.
- Samsung CITIZEN Award: Research in developing methods to reduce Android apk size from 150MB to 90MB.

ACTIVITIES

- An active member of ROBOTICS Club at IIT Dhanbad from 2013 to 2016.