

Pramod Kumar

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PROFESSIONAL EXPERIENCE

Cisco Systems

Bengaluru, IN

Software Engineer

Aug 2015 - current

- Designed and developed distributed database interfaces for Cisco wireless service discovery(SD) gateway.
- Implemented DNS guard for IOT devices to snoop and control malware communication.
- Developed internal APIs for Cisco next-gen DNS and externalized using yang model.
- Developed scalable wide-area SD-gateway solution, which support service discovery and management across enterprise with central cache and C&C on Cisco DNA controller. Majorly deployed at Apple(new campus), State of Alabama(90000+ ports in 200+ remote locations), St.Vrain Unified District (55+ schools), Disney and Arizona State University. More info - [click here](#)
- Implemented several automated test scripts to test scalability and code coverage.

Thingbator, Innovation lab at Cisco

Bengaluru, IN

Software Engineer

Aug 2016 – current

- Led a team to develop an autonomous drone with on-the-fly mission/navigation control, real-time obstacle detection, neural network based object recognition which can be used for surveillance purposes.
- Developed a binary image based precision landing system for drones using AprilTags and GPS.
- Built a 4 wheel-drive robot. Features: stereo vision and GPS based autonomous navigation using ROS.

Eatbliss

Freelancer

June-2015 - Aug 2015

- Developed an end-to-end web application for a food tech based startup to facilitate online orders.
- Features - login, item display, checkout, payment gateway, SMS/email notification, admin dashboard etc

Caterpillar Inc

Chennai, IN

Software Intern

Dec-2014 - May-2015

- Developed 'recommendation framework' for health monitoring and advising platform by reading inputs from hundreds of sensors attached to a live mining machine.
- Enhanced code coverage to 95% with 1800+ classes.

Intecons software lab

Bangalore, IN

Application developer intern

May-2014 - July 2014

- Developed a chat application similar to 2014 version of whatsapp using XMPP protocol. Features include real time message delivery, unrestricted file size/format(P2P) transfer and user/chat management.

Academic Projects

- Implemented an efficient algorithm to find maximum clique in a graph that works on both dense and sparse graphs by using reactive search for heuristic and genetic algorithm to generate vertex population.
- Worked on Sana, an open source medical project in association with MIT USA, leveraging technology to overcome resource limitations, focusing on analytics to drive evidence-based quality improvement. I contributed to Sana logging framework for debuggability improvement. [Link](#)
- Session saver Google Chrome extension - Contributed to Google-chrome store by building an extension that can save the current session in browser, export the session to other browsers and import sessions from external browsers.
- Virtual Stylist app for Myntra hackathon - Built an end-to-end android application to capture user's face, extract prominent features and suggest suitable styles based on features and previous users' recommendation.

Technologies used: Hadoop, Android programming, Image processing

- Emergency response Android app for Major League Hackathon - Designed and developed a social motive driven android application to help people in emergency situations
- Built a multi-banks secure transaction payment and login system.
- Developed a multi file selector library for android.

Patents

Accepted by Cisco for patent (Confidential).....

- Systems and methods for wide area multicast Domain Name System(mDNS) - [1011610-US.01]
- Systems and methods for mDNS Redundant query suppression - [1013374-US.01]
- Systems and methods for enabling Inter-agent mDNS roaming in Wide area network - [1012833-US.01]
- Method and Apparatus for Apple Universal Mobile Internet Proxy Printing - [1020979-US.01]

Robotics.....

[Draft]

- Automated solar plant management using plurality of unmanned aerial and ground vehicle

ACHIEVEMENTS

- Wide area Bonjour(WAB) solution won 2nd place @ Cisco Toolapalooza(2018) innovation contest for ML and Analytics application.
- Won runners award in India's first UAV hackathon 2018 conducted by Microsoft, DJI and Cyient for building a warehouse inspection and inventory management drone. [Link](#)
- Bagged several connected recognition awards at Cisco.
- Won 2nd place in android hackathon - "hack for democracy" organized by venturesity at Microsoft Bengaluru. [Link](#)
- Cognizant India scholarship for undergraduate program.

Technical skills

- Languages known: C, C++, Python, Java, full stack
- Application development: Android app, Web development, Salesforce
- Database: RDMS, NoSql (mongodb, Redis, Cassandra), TDL.
- Libraries and Protocols: STL, GLib, DNS, mDNS, DHCP, Mavlink, BCP
- Operating System: Linux, ROS(RobotOS), Cisco IOS and polaris, Android, Microsoft Windows

EDUCATION

VIT University

BS in Computer Science GPA: 8.59 / 10

Vellore, IN

Graduated: May 2015

ADDITIONAL.....

- Trainings completed: Machine learning and Deep learning - Coursera, RHCSA and RHCE, CEH, CCNA, mongodb developer.
- Relevant Coursework: Data Structures and Algorithms, Deep learning, Computer Systems, Databases, Computer Security, Abstract Algebra, Cloud Computing, Image Processing, Data Mining, Big data.