Suraj Chafle

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EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY Chicago, IL — Dec 2016
Master of Science in Computer Science GPA: 3.57/4.00

COLLEGE OF ENGINEERING PUNE Pune, India — May 2012
Bachelor of Technology in Electronics and Telecommunication GPA: 7.70/10.00

SKILLS

Languages: C++, Python, C, Java, SQL, LaTeX, MATLAB
Database: MySQL, PostgreSQL, MongoDB, DynamoDB
Web Development: HTML, CSS, Django, Javascript, Jquery
Cloud Computing: Amazon Webservices(AWS), Heroku
Tools: Git, Gdb, Jenkins, JIRA, Visual Studio
Big Data: Spark, Hadoop MapReduce, Lucene, Solr
Automation: Jenkins, Perl, Shell, CMake
Mobile Development: Android, Firebase, Parse

EXPERIENCE

ILLINOIS INSTITUTE OF TECHNOLOGY | C Programmer - Smart Grid Research — May 2016 – Oct 2016
- Developed Python scripts to generate skeleton C code for simulating power system models for exciters, generators etc.
- Optimized generated C code for faster than real-time simulation

IMAGINATION TECHNOLOGIES | Software Design Engineer | Pune, India — Feb 2015 – Dec 2015
- Built a test automation framework with Django and MySQL for frontend, python for test execution, SOAP protocol to distribute test requests and REST APIs; which resulted in reduced manual testing efforts.
- Created a white box testing framework in C++ for Video API testing which helped in earlier bug detection

ROBERT BOSCH | Software Engineer | Bangalore, India — Jun 2012 – Jun 2014
- Developed tools for automation of SDK builds, packaging and making them shipping-ready using CMake, Perl, and Shell
- Automated testing of Bosch's new OpenGL based Navigation system with Perl and Shell thereby easing continuous integration

RESEARCH

MULTIPROGRAMMING WITH NAUTILUS USING VIRTUAL MACHINES | Chicago, IL — Aug 2016 – Dec 2016
Worked with Prof. Kyle Hale to explore possibility of achieving multiprogramming without having to implement heavyweight process subsystem for Nautilus Aero-kernel by using Intel's virtualization features.

DOCUMENT SEARCH IN DISTRIBUTED SYSTEMS | Chicago, IL — May 2016 – Aug 2016
Worked with Prof. Ioan Raicu to develop a framework with distributed query distribution for overcoming limited parallel connection in document search with the centralized server. Published this research at Supercomputing Conference, 2016 [1]

PROJECTS

Benchmarking AWS instance Developed a tool in C to benchmark CPU, memory and disk performance of an AWS instance. Compared results against standard benchmarking tool viz. Linpack, Iozone and Stream

Distributed Job Scheduling Developed a job scheduler in Python using AWS-SQS and DynamoDB mimicking Animoto video creator. Used AWS-S3 to store generated videos.

Travelogue- Django App Developed a web app to maintain past travel records using Python and MySQL. Used D3, jQuery and Ajax for displaying travel statistics. Integrated Facebook OAuth login and hosted on pythonanywhere.com.

Extraction of Road and Lane boundary from Sat-Imagery Developed a tool using OpenCV in python which returns poly-lines for road and lane boundaries by processing satellite images fetched using vehicle's location.

HACKATHONS

Smart City Hackathon | Chicago — Jun 2016
Built an android app "Towed??" for locating towed/relocated vehicles using Chicago city database APIs. **2nd Runner-up**.

NGA Experidition Hack | Chicago — Sep 2016
Built an android app "CareBnB" for disaster relief management with Parse, Google map, and Facebook login. **1st Runner-up**.

PUBLICATIONS

[1] S. Chafle, J. Wu, I. Raicu, and K. Chard, "Optimizing Search in UnSharded LargeScale Distributed Systems," Nov. 2016.