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 , JIRA, Visual Studio
Big Data: Spark , Hadoop MapReduce, Lucene, Solr
Automation: Jenkins, Perl, Shell, CMake , GNU make
Mobile Development: Android, Firebase, Parse

EMPLOYMENT

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 front-end, 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 Implemented a job scheduler in Python using AWS-SQS and DynamoDB mimicking Animoto video creator. Used AWS-S3 to store generated videos.

Travelogue- Django App Engineered 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 Implemented a tool using OpenCV in Python which returns polylines 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 Expedition 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.