# PRASANTH JAYACHANDRAN

CONTACT INFORMATION

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**INTERESTS** 

Large-scale distributed systems, big data interactive analytics

**EDUCATION** 

# The Ohio State University, Columbus, USA | 2011 - 2013

MS in Computer Science and Engineering

- Graduate Teaching Assistant Advanced Databases and Data Structures using Java
- Graduate Research Assistant Database Research Group
- Graduate Assistant Advanced Computing Center for Arts and Design
- Specialization Distributed Systems and Large Scale Data Analytics

#### BITS-Pilani, India | 2004 - 2008

BE (Honors) in Computer Science with cumulative GPA of 7.59 on a scale of 10.0

**EXPERIENCE** 

## Hortonworks Inc. | Member of Technical Staff - Apache Hive | Present

 Working in Hive team on Optimized Row Columnar (ORC) file format and hive performance improvements.

## Hortonworks Inc. | Software Engineer Intern | 3 months

 Worked with Hive team on improving the performance and compression of ORC file format.

# Google Summer of Code - 2012 | Student Developer | 3 months

CUBE OPERATION IN APACHE PIG | May - Aug 2012

- Implemented CUBE and ROLLUP operators in Apache Pig to support large-scale data analysis using OLAP cubes.
- Implemented MR-Cube algorithm for distributed cubing on holistic measures.

# Samsung Electronics, India | Senior Software Engineer | 3 yrs 1 month

NETWORK PERSONAL VIDEO RECORDER | Dec 2010 – Aug 2011

- Implemented XQuery query generation engine with support for string and expression based searches using FLWOR clauses.
- Implemented event notification and subscription services for scheduled recording and content directory services in DLNA stack.

## 3D GAME PLATFORM | Jul - Nov 2010

- Implemented an optimized native rendering interface using SDL.
- Developed Lua-SDL abstraction layer using SWIG to expose SDL APIs to Lua.

#### EBOOK FRAMEWORK | Jan – Jun 2010

- Implemented color mapping module that converts RGB color values received from the application to 4bpp grayscale format.
- Developed file browser and file synchronization application using wxWidgets.

# RICH USER INTERFACE WIDGET FRAMEWORK | Jul – Dec 2009

- Developed Mind Map application for DTV using Lua-SDL.
- Improved the runtime performance of Lua script on ARM (~40% improvement for Lua SciMark benchmark) using LLVM-Lua.

#### INTERACTIVE WEB ENGINE | Aug 2008 – Jun 2009

 Developed scriptable plug-in using Netscape Plug-in Application Program Interface for handling PDF files inside webkit based browser.

# SAP Labs, India | Intern | 6 months

LEAN DEVELOPMENT ENVIRONMENT | Jan – Jun 2008

 Developed commercial quality plug-in in SAP Net Weaver IDE for managing the life cycle of Jetty. It reduced the turnaround time for application development by more than 50% as it eliminated most of the time spent on non-core activities like build and deployment.

# The Ohio State University, Columbus, USA

# **COURSE PROJECTS**

INTERACTIVE ANALYSIS OF ONLINE AGGREGATION QUERIES | Apr - May 2012

Course: Intermediate Studies in Data Interaction

- Implemented an application for online interactive analysis of aggregate queries using Apache Pig and in-memory SQLite database.
- Implemented data distribution and OLAP cube lattice visualization using d3.js.

MAP-SIDE FRAGMENT REPLICATED HASH JOIN IN YSMART | Jan - Mar 2012

Course: Intermediate Studies in Large Scale Distributed Systems for Big Data Analysis

 Implemented map-side fragment replicated hash join in YSmart (a correlation aware SQL-to-MapReduce translator) using distributed cache in Hadoop with support for full outer and left outer joins.

## COURSE MANAGEMENT SYSTEM | Sep - Dec 2011

Course: Web Services based Distributed Systems Projects

 Developed course enrolment module that enabled users to make payments using PayPal checkout.

#### BITS-Pilani, India

AUTOMATIC LICENSE PLATE RECOGNITION SYSTEM | Jan – May 2007

Course: Digital Image Processing

- Implemented modules for detecting and normalizing the number plate image.
- Developed a back propagation neural network based optical character recognition system using Matlab for identifying the alphanumerics of the license plate.

# **PATENTS**

"A System And Method For Controlling Display Device Using A Camera Based Device"

"A System And Method Of Generating Stereoscopic Images Using Mobile Devices"

"A System And Method Of Computing Rotation Angle And Tilt Angle By Employing An Opto-Mechanical Technique"

**SKILLS** 

Languages: Java, C, C++, Ruby, JavaScript, Lua

Frameworks: Hadoop, MapReduce, Pig, Hive, Ruby on Rails, d3.js

Operating Systems: Unix based systems, Mac OS X

AWARDS AND ACHIEVEMENTS

Received Best Attitude Award for the year 2010 from Samsung, India

Received merit-cum-need scholarship for the year 2004 at BITS-Pilani, India

Received the India Oil Corporation Ltd.'s scholarship from 2004-2008

Secured second position in Microsoft sponsored event Open Soft in annual

technological fest Quark 2007, BITS-Pilani, India

OPEN SOURCE CONTRIBUTIONS

OLAP CUBE operation, Grunt shortcuts in Apache Pig

Pig Latin mode in CodeMirror2 with support for syntax highlighting and auto-

completion.