

Casey Stella

CONTACT Address Available
INFORMATION Upon Request

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PROFESSIONAL **Explorys**, Cleveland, OH

EXPERIENCE *Senior Engineer*

January 2011 – Present

I am a senior software engineer on the platform team at Explorys. We are responsible for the creation, care and maintenance of the high performance indexing infrastructure. This involves a deep understanding of the Hadoop ecosystem. I spend my days writing, debugging and analyzing the performance of map reduce jobs.

- Proficiency with modern natural language processing and general machine learning techniques and approaches
- Extensive experience with Hadoop and HBase, including multiple presentations about these technologies.
- Experience with hands on data analysis and performing under pressure.
- Experience with being a non-managerial technical lead; guiding and training junior engineers.
- Devised and lead the implementation of a new architecture for more efficient data ingestion and processing.

Game Communications, Mayfield Heights, OH

Senior Engineer

November 2009 – January 2011

Designed, implemented and integrated into legacy code a scalable network infrastructure layer for an instant message and VOIP network

- Created a software routing layer and implementing an ordered, reliable protocol on top of the raw network layer
- Integrated Cassandra as a distributed persistent metadata store to provide metadata resolution for network entities on the network
- Created low-level network libraries in C++ and C# to send messages across network
- Spearheaded institution of pair-programming and semi-agile practices

ION Geophysical, Houston, TX

Research Geophysicist

October 2008 – November 2009

Member of the time processing R&D team, tasked to design, prototype and implement production-ready algorithms to use applied math and signal processing to reduce noise in seismic data. This was a telecommuting position from Cleveland, OH.

- Implemented multithreaded C++ applied linear algebra library consisting of efficient STL-compliant data structures and algorithms to assist in signal processing
- Assisted in the design and implementation of an internal flow-based map-reduce system for doing distributed scientific computation
- Used Tokyo Cabinet to provide an on-disk index of seismic metadata in an efficient way

- Implemented a multidimensional least squares adaptive filter that decreased wall-clock time for our most common seismic task by an order of magnitude
- Developed a fixed-precision algorithm in C for the embedded PowerPC 405 platform which uses first-order statistics to differentiate noise from initial signal in an accurate, efficient and robust way
- Spearheaded institution of pair-programming and semi-agile practices in a geographically dispersed environment

Oracle, Cleveland, OH

Senior Member of Technical Staff

October 2005 – October 2008

Member of the Oracle Enterprise Repository team. We provided an enterprise J2EE application to organize and manage assets and their metadata.

- Worked as part of a geographically distributed team using agile practices
- Designed and implemented an enterprise build system around Maven, porting an existing heterogeneous build system from Ant and shell scripts to Maven
- Implemented multiple performance and scalability improvements, resulting in substantial benefits deriving from better caching strategies and algorithms with more favorable CPU/Memory complexity characteristics.
- Managed summer interns

CERTIFICATION	Cloudera Certified Hadoop Developer	August 2012
	Cloudera Certified HBase Developer	August 2012

EDUCATION	Texas A&M University , College Station, TX	
	<i>Masters of Science in Mathematics</i>	Spring 2005
	<ul style="list-style-type: none"> • Emphasis in Computational Complexity and Theoretical Computer Science • Advised by Dr. J. Maurice Rojas 	

University of Louisiana at Monroe, Monroe, LA

<i>Bachelors of Science in Mathematics and Computer Science</i>	Spring 2002
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SELECTED PUBLICATIONS, PATENTS & TALKS	<p>J. Maurice Rojas, Frederic Bihan, and Casey Stella “Faster Real Feasibility via Circuit Discriminants”, In <i>Proceedings of ISSAC 2009</i>, pp. 39-46, ACM Press, 2009.</p> <p>“New Complexity Thresholds for Sparse Real Polynomials”, <i>Sixth International Joint Meeting of AMS and SMM</i>, Invited Talk</p>
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“SYSTEM AND METHOD FOR USING AN EDITABLE LIFECYCLE EVENT DISTRIBUTION LIST WITH A SERVICE METADATA REPOSITORY”,
Patent Issued March 27, 2012, Patent number 8145680, Oracle Corporation

HONORS AND AWARDS	<p>Outstanding Teaching Assistant [2005]</p> <p>National Science Foundation VIGRE Fellowship [2004]</p> <p>AUF & Regents Fellowships for Outstanding Academic Achievement [2003]</p>
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