Zachary H. Jones

Performance Analyst, Computer Scientist, Software Developer,
Cloud Guru, and Data Storyteller

Performance Engineer with 9 years of engineering and innovation experience driving performance changes into solutions; leading efforts across teams to wrangle, manage, and understand data; and championing efforts to embrace "the cloud".

EXPERIENCE

NetApp — *Analytics Platform & SaaS Developer*

OCT 2013 - PRESENT

Led development efforts to produce modern analytics platforms for an internal performance monitoring product and cloud-based customer monitoring product.

- Developed services to transform/query performance data generated by ONTAP and metrics engine/recipes to convert data into higher-level forms to enable decision making from developers to executives.
- Delivered prototype, AWS hosted, analytics platform that exceeded MVP target in under 8 weeks by leveraging open-source projects and AWS elastic services.
- Worked with teams across the company to understand data problems in order to guide development of product and ensure successful deployments.

Integrated Jupyter Notebooks into the performance development and analysis workflows to allow sharing and collaboration between performance analysts, engineers and support.

- Designed and developed extensions to Jupyter to convert notebooks into static reports, an interface to generate dynamic reports, and a website to unify UX.
- Exploratory and reporting tools were built to meet an unfilled need. The efficiency improvements provided by the tools resulted in use by 100+ engineers daily.

YouMarco — *Owner, Architect, Lead Developer*

MAR 2015 - PRESENT

Focused on delivering social media polling and aggregation to the masses in a frictionless, anonymous, free online service.

- Designed scalable back-end, unified multi-platform mobile/web application interface, and hybrid cloud/local test, build and deploy workflow.
- Led engineering team through research, design, implementation, and deployment phases of development.
- Leveraged open-source and cloud services include Google Cloud Platform, Python, Angular, Cordova, Git, Grunt, Wercker, Locust for rapid development under constrained resources.

NetApp — *Performance Analyst*

DEC 2011 - OCT 2015

Led analysis investigations on next-generation software defined platforms: ONTAP Select & Cloud.

- Increased performance between 100% and 300% across platforms and workloads.

CONTACT

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SKILLS

Performance Engineering & Analysis

Software Defined Storage

Cloud Storage / GCP / AWS

*nix / VMs / Containers

Python / JS / C

Jupyter / SciPy Stack

Single Page Applications / Cordova / AngularJS / Material Design

PATENTS

US 9083608 & 9088479
Automatically selecting appropriate platform to run application in cloud computing environment

US 9075643 & 9075645
Automatically selecting optimal transport protocol in a cloud computing environment

US 8965754 & 8972245
Text prediction using environment hints

US 8949848
Reducing usage of resource utilized by a virtual machine whose resource utilization is adversely affecting neighboring virtual machines

4 Provisional Patents
In progress with YouMarco

- Organized and led weekly technical deep-dive meetings with engineering to drive performance critical changes into ONTAP.
- Managed relationships between engineering, automation, and infrastructure teams.
- Responsible for communicating progress, results, and challenges to technical and management leadership.

Led analysis for development of File & Free Space Reallocation technologies in ONTAP.

- Engaged with development to ensure technologies provided long-term benefits and identified, isolated, and fixed several critical bugs.
- Worked with support to determine when and how to engage with customers on using these technologies.
- Analyzed data collected across customer base to understand the rate of and impact on performance of aging to FAS platforms and presented findings at several company-wide tech talks.

Contributed to and validated the design and implementation of SPEC SFS® 2014.

PRIOR EXPERIENCE

IBM MAY 2007 - AUG 2009, NOV 2010 - DEC 2011
Performance Engineer Intern, Performance Engineer for WebSphere Product Family

Toyota Racing Development USA MAY 2010 - DEC 2010
Performance Engineering/HPC, Simulation Engineering, Video Processing/Data Extraction

Clemson University, School of Computing AUG 2006 - DEC 2010
Graduate Research Assistant, Sporting Events Mobile App/Infrastructure Developer, System Administrator

EDUCATION

Ph.D. Computer Science — *Clemson University* — Dec 2010
Thesis: A Framework for Virtual Device Driver Development and Virtual Device - Based Performance Modeling
Advisor: Dr. Robert M. Geist, III

B.S. Computer Science & Mathematics — *High Point University* — May 2006
All University Honors, Highest Departmental Honors, Summa Cum Laude
Overall GPA: 3.9/4.0, Computer Science GPA: 4.0/4.0, Mathematics GPA: 3.9/4.0

CONFERENCES/PRESENTATIONS

POSTERS

Jones, Zachary H. **Integrating IPython into Large-Scale Development Environments.** 13th Python in Science Conference (SciPy 2014), July 2014.

PUBLICATIONS

Geist, Robert, Jones, Zachary H., and Westall, James. **Predicting (Disk Scheduling) Performance with Virtual Machines.** In *Proceedings of Performance Evaluation of Computer and Communication Systems: Milestones and Future Challenges* (PERFORM 2010), October 2010.

Geist, Robert, Jones, Zachary H., and Westall, James. **Virtualizing High-Performance Graphics Cards for Driver Design and Development**. In *Proceedings of the 19th Annual Int. Conf. of the IBM Centers for Advanced Studies on Collaborative Research* (CASCON), pp. 261-269, November 2009.

Geist, Robert, Jones, Zachary H., and Westall, James. **Virtualization of an Advanced Course in Operating Systems** (Extended Abstract). In *Proceedings of the 3rd International Conference on the Virtual Computing Initiative*, pages 61-64, October 2009

Dean, Brian C. and Zachary H. **Rank-Sensitive Priority Queues**. In *Proceedings of the Algorithms and Data Structures Symposium* (WADS), pp. 181-192, August 2009

Geist, Robert, Jones, Zachary H., and Steele, Jay. **Parallel Processing Flow Models on Desktop Hardware**. In *Proceedings of the 46th ACM Southeast Conference* (ACMSE), pp. 417-422, March 2008.

Dean, Brian C. and Jones, Zachary H. **Exploring the Duality between Skip Lists and Binary Search Trees**. In *Proceedings of the 45th ACM Southeast Conference* (ACMSE), pp. 395-399, March 2007.