# **Data Analyst / Performance Engineer / Tool Developer**

# **Professional Summary**

**Data Analyst**. Broad analytical skills to show the big picture view of chaotic data. Student of Data Science courses, papers, and new techniques. Developer in R, both solution-specific scripting and implementation of apps and packages.

**Performance Analyst**. Analysis and troubleshooting of performance problems. Delivered industry-leading benchmark results on systems ranging from mainframe-class down to smartphones. Effective investigation of bottlenecks at hardware-level, inside OS kernels, through databases and middleware stacks, over networks and across application codes. Skilled at developing metrics and visualizations that characterize and communicate the underlying performance behavior.

- Delivered new-product benchmark results to support 10 years of keynote presentations at the Consumer Electronics Show (CES). Similar track record backed other external and company-wide marketing events.
- Regularly supplied data and analyses for many years of quarterly competitive product reports considered "every time reads" by company executives and senior R&D management.

**Benchmark and Tool Development.** Extensive experience developing a wide variety of new standardized benchmarks for multiple generations of computing products. Skilled across many classes of performance challenges from multi-tier server architectures, over to server appliances, across personal computers, and down to smartphones. Understands existing processes and crafts tools that robustly fill the necessary gaps with sustainable solutions.

• Elected chairperson of multiple industry-wide standards committees in SPEC and BAPCo, developed and released leading standardized benchmarks in their respective \$50 and \$100 billion marketplaces.

# **Career Progression & Notable Contributions**

#### Student | 2016 -

- Studying data-science tools and environments (e.g. R, Tableau, JMP) and languages (e.g. Scala, Python Pandas).
- Recent certifications earned include: Machine Learning by Andrew Ng of Stanford, Statistical Learning by Hastie
  and Tibshirani of Stanford, and Data Science Specialization by Caffo, Leek, and Peng of John Hopkins University.

## Intel Corporation | 2003 - 2015

#### SENIOR PERFORMANCE ANALYST (Smartphones: 2011-2015)

- Led a team of 6 to 9 engineers and technicians whose work is delivered to company executives, across R&D group managers, and to all parts of the field sales teams; measure and analyze ~100 devices/year.
  - Started this team as a single engineer building a new lab out of unused basement space. Within 2 years earned the company's commitment to concentrate all related measurement and analyses in our team.
  - Developed internal tools (e.g. trace processing, storage, and visualizations) now replicated in labs in different divisions across the company.
- Developed new benchmarks and lead cross-industry benchmark standards committees.
  - Initiated development at SPEC (Standard Performance Evaluation Corporation, spec.org) and EEMBC (Embedded Microcontroller Benchmark Consortium, eembc.org) to add smartphone benchmarks to their product lines; AndEBench has since become one of EEMBC's marguee products.

#### **Prior Growth at Intel Corporation:**

Senior Performance Engineer (Laptop PCs: 2003-2010)

- Analysis: Delivered industry-leading benchmark results for each generation of Intel's mobile processors.
- Development: Chaired MobileMark Committee at BAPCo (2003-2006).

# Career Progression & Notable Contributions, Continued

#### Hewlett-Packard Company | 1987 - 2002

#### **SENIOR PERFORMANCE ENGINEER** (1996-2002)

- Analyzed and tuned performance of HP server products (proprietary and commodity servers and software).
- Lead representative to SPEC standards committees, developed and released industry-changing benchmarks.
- Crafted tools and methodologies that were used across performance teams to drive performance measurements and analyze results.
- Performance architect for HP adaptive data center solutions.

#### **Notable Contributions:**

- Delivered world-leading TPC and SPEC benchmark results across 10+ generations of HP Server products (HP 3000 Mini Computers, HP PA-RISC Unix Servers, and HP NetServers). Consulted with internal and 3<sup>rd</sup> party (Oracle SQL, MS SQL, Informix) developer teams to remove performance issues that were uncovered by our ability to take systems beyond the reach of other teams.
- Founding Chairperson for SPECweb committee. Established new category of standardized web-server benchmarks that proved to be one of SPEC's most published benchmarks.

### **Prior Growth at Hewlett-Packard Company:**

Manager: Managed performance team developing and analyzing "dot-com" solutions

Performance Engineer: Performance analysis in Unix Kernel Development team - SPEC Representative

Performance Engineer: Benchmarking on HP/UX and HP MPE/XL Systems - SPEC and TPC Representative

Software Engineer: Supported and enhanced low-level internals for HP's SQL database products

# **Professional Development**

#### **Education:**

Masters of Science, Computer Science | University of Vermont Bachelors of Science, Computer Science | University of Vermont Bachelors of Arts, English | University of Vermont

#### **Volunteer Activities:**

<u>SPEC Editor</u> (Standard Performance Evaluation Corporation): Board-appointed officer for many years responsible for external publications (e.g. www.SPEC.org), as well as ensuring internal tools/services (wikis, email, source control, archives, et al) scale to satisfy the needs of member companies and universities worldwide.

<u>Director and Coach for Youth Soccer</u>: Director for Pacific Coast Spring Soccer League, Coach-Director for Cupertino FC competitive soccer club, board member for both Area 2J and Region 35 of AYSO; working with dozens of teams over the last decade (competitive clubs, school teams, and recreational) up through the U19 age division; AYSO and USSF certified coach.

<u>Educational Electronics</u>: Helping young engineers find their connection to technology utilizing open-source environments with Raspberry Pi, Arduino, and other tools.