Jonathan Eunice

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@jeunice on Twitter

Objective

Challenging "full stack" development, DevOps, and technology leadership role—ideally one with the leverage to advance "how things are done" and the opportunity to mentor and accelerate the progress of others.

Employment

Independent **2011-present**

Developed, optimized, operated, and occasionally rescued scores of apps/projects. Active open source contributor in Python and JavaScript. DevOps speaker and educator. Five-star mentor and on-demand expert through codementor.io.

Illuminata, Inc. **1993-2014**

Founder and principal advisor for IT analysis and consulting firm. Routinely retained by the world's leading technology companies (e.g. AMD, BMC, Brocade, CA, Cisco, Dell, EMC, HP, IBM, Intel, Microsoft, Oracle, Red Hat, Samsung, Sun, and VMware), as well as venture startups, investors, industry associations, and enterprise and government agency customers. Evaluated technologies; advised executives, developers, architects, and fellows on products, trends, requirements, and markets; served as expert witness in legal, procurement, and benchmarking disputes; trouble-shooter; internal IT developer; author and industry speaker. Early expert on SMP, NUMA, and blade servers, Big Iron Unix, virtualization, Linux, open source, scale-out and internet-scale computing, SOA and web services, rich internet apps, IoT, grid and cloud IT, and DevOps. One of the most-quoted, most-respected, most-consulted analysts in the world.

D.H. Brown Associates **1988-1993**

Recruited out of grad school to analyze emerging technologies, standards, product lineups, and market opportunities for buy-side financial industry, and later, industrial clients. Early expert on object-oriented programming and databases, RISC CPUs, 3D solid modeling, FEA, industrial product/process management, and the rise of Unix, client/server, and distributed computing. Author, consultant, and public speaker, both in the U.S. and abroad.

Education

On the Job **1982-present**

Constant study of broad swath of IT systems (CPUs through clouds), data (structures through DBMS, ETL, "big data," data science, and "unstructured" documents), workloads (web, OLTP, batch, HA, HPTC, HFT, analytics), tools (languages, middleware, frameworks, and APIs), processes (open source, SOA, agile, CI/CD, underlying business), manageability, economics, culture, UX, DevOps, and fifty-three other areas.

University of Pittsburgh **1987-1988, 1991**

Department of Computer Science. Ph.D. track. Programming languages, compilers, visual languages, computational theory and complexity, machine learning, and operating systems. Recruited away by Wall Street firm (DHBA) before degree.

Florida Atlantic University **1983-1986**

BA Mathematics and Computer Science. Emphasis on combinatorics, graph theory, numerical analysis, computer graphics, data structures and algorithms, compilers, operating systems, and expert systems. *BA Philosophy.* Emphasis on logic, rhetoric, underpinnings of science and language, ethics, aesthetics, and the history of Western thought.

Analyst • Anthropologist • Architect • Developer • Operator • Mentor • Polymath • Speaker • Smokejumper

Jonathan Eunice:
Selected Projects

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Rescue and Successful Operation of firstnight.org

First Night. Called in to fix a "We're down!! HELP!!!" situation a few days before the start of First Night, a festival that brings over a million people to Boston for a single day (New Year's Eve). In first year, worked on an emergency save-the-patient basis to transfer operation to scalable cloud resources and iteratively optimize the live site and its sub-services (e.g. mapping, Twitter feed, live updates) to regain and maintain availability. In second and third years, worked in non-emergency mode to properly pre-optimize the site and its services, then operate site in a DevOps/live scaling/active monitoring mode. Site and services operated economically (First Night was a nonprofit), under heavy load, without a single moment of downtime. AWS (EC2, S3, CloudFront, Route 53, CloudWatch, SNS), Linux, Bash, Mercurial, WordPress, MySQL, PHP, Python, JavaScript, FireBug, YSlow, automation and orchestration glue

DevOps and Application Stack

WayUp. Called in to improve the availability, performance, latency, and other operational aspects of the WayUp application stack and back end; to built substantial testing, monitoring, CI/CD and DevOps practices; and to help mature processes, advise on scaling up application and operational infrastructure, and mentor junior developers. Heroku, AWS, Git, Github, Circle CI, Logentries, Papertrail, Librato, New Relic APM, Python, Django, PostgreSQL, Celery, REDIS, JavaScript, DevOps glue scripting

ETL for Least Friendly CMS Ever

D.H. Brown Associates and IBM. Built content-ingestion/ETL front-end for IBM COMP database, the most persnickety CMS ever. Working with COMP was extremely frustrating and inefficient given its Byzantine rules of input formatting, including pre-declaration of references, character set restrictions, rigid indentation, and inflexible data ordering requirements. Content submissions were frequently rejected, often for technical nits not readily comprehensible to, nor easily fixed by, most content creators. Resolved this human factors FAIL with a preflight tool that eliminated ~95% of submission effort. It fixed many formatting issues automatically, clearly flagging the remaining corner cases for human rework. Substantial UX, time-to-market, and economic wins. Perl, IBM COMP

Data Visualization for Federal Agency Grants

Built network explorer visualization coupled with Topic Modeling backend to help federal agencies understand and cross-correlate far-flung R&D projects and spending. D3.js, JavaScript, Python, Jupyter, NumPy, JSON, CSV, SVG

Telephony Services Integration

Explored feasibility of mapping custom code from one bespoke telephony API to another vendor's environment and API. Studied API verbs, data formats, semantics, and security. Raised red flags on feasibility of real-time notification and deficient security of proposed new vendor. Web services, REST, JSON, CSV, Python

Medical Display System

Developed several generations of upgrades to an existing medical outcomes display. Collaborated with designer. Simplified existing code and added a half-dozen major features. Major time-to-market contribution. JavaScript, JSON, D3.js, SVG, HTML, CSS

Political Sentiment Mapping

Data-cleansed and geo-coded 1M+ tweets surrounding a political announcement. Built 60fps animation engine to display tweets on a world or national map. Embedded map, animations, and play controls into project Web page. Major time-to-market contribution; completed on *rush* basis. Python, Jupyter, REST, cloud servers, Pandas, JavaScript, CSV, JSON, D3.js, SVG, HTML, CSS

Automated Publishing Workflow

Illuminata, Inc. Thorough automation of production publishing workflow. Ingested numerous formats (Microsoft Word, HTML, ODF). Automatically imposed corporate document style requirements. Auto-published to multiple formats (HTML and PDF). Required double-backflip-with-twist data transformations and integrations, some borderline-impossible given available APIs. Transformations rule-based and extensible. Eliminated thick run book and numerous sticky notes; accelerated process by days. Microsoft Word, Microsoft Office formats, Open Document Format, Open/LibreOffice, X/HTML, XML, PDF, Perl, Java, Python, UNO, Tk, MySQL, REST, AWS

Visualization Code Review

Asked to review a data-intensive visualization system. Examined code structure, quality, and execution speed. Evaluated possible data-fetch and rendering optimizations. Confirmed current design and implementation. AngularJS, JavaScript, D3.js, SVG

Parallel API Engine

Developed parallel engine to efficiently make 100K–10M inquiries against a service provider that rate-limits API calls to hundreds/hour. Collapsed what could have been months or years of data collection into days. Involved concurrency, adaptive rate optimization, cross-worker coordination, checkpointing and process recovery, scalable credential management, a CLI interface, and Excel report generation. Python, Pandas, REST APIs, JSON, CSV, Excel

Document Generator

Reads YAML-format data and automatically generates the structured, nicely human-formatted document you're now reading. Takes Unicode characters and embedded formatting in stride, rendering to a choice of Web, Word, or PDF output. Python, YAML, HTML5, CSS, Microsoft Word, PDF

Miscellaneous

Extensions to Unix kernel (C). Multi-threaded RPC server (Solaris, C). AJAX Markdown editor (Python, JS, jQuery, Flask). PDF annotator (Java, PDF, iText). varied

GitHub	~100 Git repositories owned or actively contributed to https://github.com/jonathaneunice
Bitbucket	Dozens of Mercurial repositories (and a few Git) https://bitbucket.org/jeunice
Travis CI	Numerous continuously-integrated open source projects https://travis-ci.org/jonathaneunice
stackoverflow	7.5K points; active and broad contributor (top 3% this year) http://stackoverflow.com/users/240490/jonathan-eunice
SWEngineering	7.5K points; active and broad contributor (top 2% this year) http://softwareengineering.stackexchange.com/users/55314/jonathan-eunice
Python	Contributor to Python core (CPython). Numerous published modules. https://pypi.python.org/pypi/intspan https://pypi.python.org/pypi/options https://pypi.python.org/pypi/say