Chris Arnesen

San Diego, California
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Education

Ph.D. Physics, Massachusetts Institute of Technology, Cambridge MA, 2002-2007

B.S. Physics, California Institute of Technology, Pasadena CA, 1997-2001

Experience

OPEN-SOURCE SOFTWARE ENGINEER • @CARNESEN • AUGUST 2018 - PRESENT

Contributed to Google's Node.js libraries for Google Cloud Platform (GCP). Automated deployment of my personal sites and services to GCP using Node.js and TypeScript. Developed and published TypeScript micro-packages and bitcoin server utilities.

LEAD FRONT-END ENGINEER (CONSULTANT) • AMERIPRISE FINANCIAL • OCTOBER 2017 - JULY 2018

Led development of browser-based web applications (React, TypeScript). Collaborated with the DevOps team to institute internal code sharing via npm. Implemented the enterprise-wide front-end "reference application", a set of project templates and tools to encourage use of best practices and approved technologies.

SENIOR SOFTWARE ENGINEER (CONSULTANT) • YA ENGAGE • APRIL 2017 - SEPTEMBER 2017

Automated provisioning for and deployment of web applications to Amazon Web Services (AWS) using Node.js. Secured the production environment and set up monitoring, logging, and alerts. Developed multi-tenant web services (Node.js, PostgreSQL) and custom websites (React, Angular.js).

SENIOR SOFTWARE ENGINEER • GLOBAL TRAFFIC TECHNOLOGIES • FEBRUARY 2016 - MARCH 2017

Led a nascent web engineering program. Developed cloud and embedded services (Node.js, MongoDB) and internal and customer-facing browser applications (React, Angular.js). Instituted automated testing, continuous integration, code reviews, reproducible builds, continuous deployment (AWS), and other best practices.

LEAD DEVOPS ENGINEER, STORYCLOUD • MOUNTAIN VIEW, CA • MARCH - DECEMBER 2014

Configured cloud computing resources for a Silicon Valley startup (AWS, Ansible). Standardized local development and cloud deployment environments (Vagrant, VirtualBox). Implemented continuous build-test-release pipelines and live monitoring, logging, and alerts.

FIELD CONSULTANT, AB INITIO SOFTWARE • JUNE 2011 - DECEMBER 2013

Provided on-site technical assistance to high-value customers. Invented a novel data differencing algorithm. Was architect and lead developer for the sunsetting of a mission-critical mainframe at a major airline.

Experience (continued)

INTERNAL CONSULTANT, AB INITIO SOFTWARE • LEXINGTON, MA • APRIL 2009 - MAY 2011

Responded to customer support requests about application design, performance tuning, production outages. Delivered on-site instructor-led training courses. Developed a unified framework for the company's diverse demonstration and training materials.

POSTDOCTORAL RESEARCHER, CARNEGIE MELLON UNIVERSITY • SEPTEMBER 2007 - JANUARY 2009

Calculated theoretical Higgs boson production rates at the Large Hadron Collider (LHC).

Skills

Software engineering, web engineering, leadership, DevOps, technical writing, application architecture, distributed data processing, education, consulting, customer interaction, security, configuration management, automation, testing, modeling

• Languages: TypeScript, JavaScript, HTML, CSS, Ab Initio, SQL, Script, Ansible, Matlab, Mathematica, Bash, Ksh, Python, PHP, Fortran, LaTex, Cobol, Markdown

• JavaScript: Node.js, React, Redux, Angular, BackBone, Webpack, Babel, Next.js, create-react-app, Pug, lodash, Gulp, ES5, ES6, ES7, ES2015, ES2016, ES2017

• Cloud: Amazon Web Services, Google Cloud

• Databases: Bitcoin, PostgreSQL, MongoDB, SQL Server, MySQL, Teradata, Oracle, Hadoop, HBase, Kafka, ElastiCache, WebSphere MQ, RabbitMQ, Ab Initio multifiles and queues

• Version control: Git, npm, Subversion, Maven, Perforce

• Other technologies: Blockchain, GitHub, Docker, virtualization, Vagrant, REST

• Operating Systems: Linux, macOS, Windows, AIX, SunOS, z/Linux

• Math & physics: linear algebra, geometry, quantum mechanics, quantum field theory, statistics, calculus, trigonometry, complex analysis, Fourier series, linear regression, classical mechanics, symmetry groups, genetic algorithms