

Chris Arnesen

Saint Paul, Minnesota  
chris.arnesen@gmail.com  
617-803-1773

## Experience

### **VICE PRESIDENT, TECHNOLOGY DEVELOPMENT • TRADEWEB • NOVEMBER 2020 - PRESENT**

Architected and built GraphQL APIs for anonymous digital financial exchanges. Managed project timelines and led software development. Contributed to core software libraries and shared infrastructure automation. (Node.js, TypeScript, Docker, Ansible).

### **OPEN-SOURCE SOFTWARE ENGINEER • JANUARY 2015 - PRESENT**

Contributed to popular open-source TypeScript packages and developed new ones e.g. a command-line interface (CLI) framework for Node.js and web browser.

### **STAFF SOFTWARE ENGINEER, INFRASTRUCTURE • FLOCK FREIGHT • OCTOBER 2019 - OCTOBER 2020**

Managed cloud computing resources and application technology (Google Cloud Platform, MySQL Docker, Kubernetes, Python, Node.js, Terraform, Java). Provided architectural guidance and oversight. Remedied production outages (Datadog).

### **SENIOR WEB DEVELOPER • ALWAYS AI • FEBRUARY 2019 - OCTOBER 2019**

Designed and built a fledgling computer-vision startup's software-as-a-service (SaaS) platform and command-line interface (CLI) (Node.js, TypeScript, Postgres, AWS Lambda, Docker). Implemented user-facing web browser applications (React, Next.js).

### **LEAD FRONT-END ENGINEER (CONTRACT) • AMERIPRISE FINANCIAL • OCTOBER 2017 - JULY 2018**

Led efforts to modernize and standardize web browser development across the enterprise (React, Node.js, TypeScript, npm, create-react-app).

### **SENIOR SOFTWARE ENGINEER (CONTRACT) • YA ENGAGE • APRIL 2017 - SEPTEMBER 2017**

Automated the provisioning of cloud resources and deployment of web applications. Developed multi-tenant web applications (Node.js, Postgres, AWS, React, AngularJS).

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

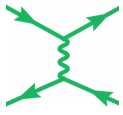
Led a nascent web engineering team. Evangelized adoption of engineering best practices. Built web services running in the cloud and embedded on city buses (Node.js, MongoDB). Designed and built browser-based real-time admin interfaces (React, WebSockets).

### **LEAD DEVOPS ENGINEER • STORYCLOUD • MARCH - DECEMBER 2014**

Configured cloud computing resources for a Silicon Valley startup (AWS, Hadoop, Elasticache, Kafka). Standardized local development and cloud deployment environments

### **SOFTWARE CONSULTANT, AB INITIO SOFTWARE • APRIL 2009 - DECEMBER 2013**

Provided support and on-site technical assistance, training, and application development for high-value enterprise customers. Built mission-critical high-volume data processing applications, batch (ETL) and real-time. Invented a novel data differencing algorithm.



# Chris Arnesen

## Experience continued

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

Calculated Higgs boson production rates at the Large Hadron Collider (LHC) (quantum field theory, Mathematica, Fortran)

## Education

**PH.D. PHYSICS • MASSACHUSETTS INSTITUTE OF TECHNOLOGY • 2002-2007**

Thesis: Model-independent approaches to QCD and B decays

**B.S. PHYSICS • CALIFORNIA INSTITUTE OF TECHNOLOGY • 1997-2001**

## Skills

Web engineering, DevOps, technical writing, application architecture, distributed data processing, consulting, security, configuration management, automation, testing

- Programming languages: TypeScript, JavaScript, Python, HTML, REST, CSS, Java, Ab Initio, SQL, Bash, Shell, Markdown
- Web tech: Node.js, Express, Koa, Hapi, React, Redux, Angular, Webpack, Babel, Next.js, Nest.js, HTTP, HTTPS, WebSockets
- Cloud providers: Amazon Web Services (AWS), Google Cloud Platform (GCP)
- Configuration management: Ansible, Terraform, Vagrant
- Cloud native: Kubernetes, Docker, Helm, Argo
- Databases: MySQL, PostgreSQL, MongoDB, Bitcoin, SQL Server, Teradata, Oracle, Hadoop, HBase, ElastiCache, Ab Initio multfiles
- Queuing: Google Pub/Sub, Kafka, Ab Initio queues
- Version control: Git, npm, Subversion, Maven, Perforce
- Other technologies: Blockchain, GitHub, virtualization, Datadog, New Relic
- 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