

Tim Bailey-Jones

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Profile

Dynamic software developer and cloud engineer with extensive skills across Linux, AWS, GCP, Kubernetes, frontend, backend, DevOps and AI-assisted dev tools. Successfully contributed to projects utilizing diverse technologies, enhancing system performance and reliability. Skilled in collaborating with teams to streamline workflows, which boosts productivity. Offers a strong foundation in technical problem-solving and a commitment to driving innovative solutions for team success.

Work Experience

07/2024 — PRESENT AUSTIN, TX, UNITED STATES

Software Developer at Amazon Robotics Game 7 Staffing

Client: Amazon Robotics, Westborough, MA / Toronto, ON

- Plan, code, test and execute migrations of dozens of legacy Typescript, Golang, and Java repositories, using AWS CDK toolkit and internal Amazon build tools to orchestrate AWS infrastructure deployments, avoiding downtime. Became well-versed in using **Amazon Q**, **Claude** & **Cline** AI code assistants, boosting productivity and quality.
- Make other improvements as needed to increase throughput & scalability, fix bugs, and lower costs by upgrading RDS engines from Aurora/MySQL 5.7 to 8.0. Included DBA work.
- Review/approve the Pull Requests of other team members, and provided useful feedback.

01/2021 — 03/2024 ATLANTA, GA, US

Cloud Engineer McKinsey & Company

McKinsey is a global management consulting firm.

- Developed automated build, deployment and security pipelines for Matter Foundations (MF), our Cloud Foundation product for all three clouds. Includes installation of backstage.io & GitLab CE.
- Wrote AWS/GCP account cleanup scripts in golang to enable repeatable end-to-end build validation.
- Performed extensive end-to-end E2E testing spanning across 30 MF repos (hosted in GitHub)
- Updated documentation for deployment guide (Confluence)
- Paired with and mentored junior developers.
- Contributed to the AWS and GCP versions of MF.
- Continued to serve CandidPartners clients
- Represented McKinsey at AWS:ReInvent conference in 2021

Skills: AWS & GCP, Linux, Mac, bash, docker, terraform, GoLang, python, node, Javascript/TypeScript, serverless, automated testing, DevSecOps pipelines (tfsec / checkov), GitLab, GitHub Actions, lambda, RDS, S3, Cloudwatch

Work Experience

05/2020 — 01/2021 ATLANTA, GA, USA

DevOps Engineer CandidPartners.com

Candid Partners was a cloud consulting firm that was acquired and renamed Cloud by McKinsey in January 2021.

- Made dozens of improvements to AWS microservices for a Payment Gateway client, including a serverless lambda to encrypt credit cards, immediately after payment processings.
- Wrote python/boto script to migrate RDS databases from one engine to another, with minimal downtime and no data loss.
- Implemented parts of ELMA (Enterprise Logging, Metrics & Analysis), a serverless AWS-native logging application, for a prominent public-sector client.

Skills: AWS, terraform, Jenkins, python3, RDS, Lambda, PCI compliance, encryption, SQS/SNS, RDS, S3, Cloudwatch, Cloudtrail, etc.

Skills

Cloud Technologies:

- Linux (Debian/Ubuntu, RedHat/Amazon/Centos)
- Shell Scripting (bash/zsh), on-prem system admin.
- AWS - 3 certs (Sol. Arch., DevOps Pro, Developer Assoc).
- Google Cloud Platform (Prof. Architect Cert. 12/2023).
- Terraform / OpenTofu (AWS, GCP, Azure)
- Docker / Kubernetes / GKE / AKS
- Python / boto3

Programming Languages / Frameworks:

- GoLang (APIs, RDBMS work, containers/lambda)
- Node / Express (used for AWS lambdas, CLI programs)
- Java (1.x through 1.8, command line, servlets, JDBC)
- C, C++ (Linux / commercial Unix)
- PHP / ColdFusion (see Project section: gotonight.com)
- JavaScript, Typescript, including ES6/ES7

AI Assisted Development:

- Amazon Q, Gemini, Claude, Cline
- Uses: Planning, Testing, Documentation, Code Reviews & Security Scanning

User Interfaces:

- HTML / CSS, React, bootstrap, MaterialUI
- Text-based CLIs, ncurses, and X11/Gtk/Qt XWindows

Databases:

- AWS RDS, AWS Aurora, GCP CloudSQL
- SQL: Postgres, MySQL, SQL Server, HP Vertica, Oracle
- NoSQL: DynamoDB, MongoDB, Memcache/Redis

Work Experience

08/2017 — 05/2020 RESTON, VA, US

DevOps Automation Engineer Stelligent Systems

Stelligent was an engineer-driven AWS Advanced Consulting Partner, whose business focused solely on DevOps, CI/CD pipelines and Automation on AWS.

- Consulted with clients about technical and organizational DevOps practices.
- Contributed new features to open source tools like Stelligent mu (microservices in AWS).
- Conducted training sessions for client development teams on CI/CD topics, automated unit tests.
- Wrote technical articles for internal and external audiences.
- Implementation of repeatable, resilient CI/CD pipelines for applications and infrastructure.
- Represented the company at AWS Re:invent conferences in 2017 and 2018 (Las Vegas, NV)
- Clients included AQR Capital, 3M, Refinitiv/Thomson One, Atrium Campus, and RugsUSA.

Stelligent was acquired by Mphasis in Nov. 2018, and my role continued as before. The Stelligent brand is still being used by Mphasis.

Skills: AWS, terraform, CloudFormation, Linux, Docker, ECS, S3, RDS, Lambda, CICD Pipelines, Jenkins, CodeBuild/CodeDeploy, CodeCommit

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-stelligent>

09/2016 — 04/2017 TAMPA, FL, USA

Sr. Software Engineer Impulse Point (now OPSWAT)

Responsibilities related to Impulse's flagship product SafeConnect, which is a managed on-site Linux cluster providing network access control (NAC) to universities and businesses:

- Converted existing local SVN codebase to cloud-based git repositories, hosted by Atlassian BitBucket
- Implementing bug fixes and new feature development (Linux, Angular 1.x, Java 7, Tomcat 7).
- Adding Netconf-based programmatic router control to SafeConnect (with Juniper JunOS).
- Create, update and deprecate technical and developer documentation as needed (Confluence)
- Assisted Customer Service department as needed to replicate bugs reported by end-users.
- Researching moving existing product to cloud (AWS)

Skills: Porting · Linux · Databases · C++ · Java · Mac OS X · Python · Shell Scripting · XML · Web Applications · REST · System Administration · Troubleshooting · Open Source · Networking · TCP/IP · Devops · Cloud Computing · Ansible · SQL · JavaScript · HTML5 · Angular 1.x

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-impulse>

Work Experience

07/2015 — 09/2016 TAMPA, UNITED STATES

Sr. Advisory Systems Engineer Syniverse Technologies

Technical Lead for VisProactive (VPA) development team.
Business context:

- Live ingestion of International Cellular Roaming traffic
- Near-realtime detection of related error messages & timeout conditions that prevent serving carriers from processing calls of roaming travelers
- Alerting the Network Operation Centers of both serving and home carriers so they can collaborate in resolving these errors ASAP.

Initial VisProactive release: UniRoam/SS7GSM data feeds.

- Led the creation of backend services to ingest data, run summarization queries every 15 minutes, and compare latest 6 summary records to each other to programmatically identify anomalies and trends on a variety of key fields. Database: Oracle.
- Created alerting infrastructure to allow users to select which thresholds they wanted to see alerts for, and which emails should receive alerts.

Subsequent VPA releases for MDR/UDR, SS7CDMA feeds

- Each edition used the same overall architecture as the first.
- Converted Oracle DB to Vertica (5.0 through 7.3).
- Implemented load-balancing functionality to backend Vertica databases using open-source Octopus-LB program.
- Implemented process monitor for all feeds using open-source SupervisorD.org program, to allow web-based control of VPA services.
- Performed advanced SQL tuning of large summarization queries, including techniques which override the cost-based optimizer, therefore eliminating the need to run "UPDATE STATISTICS" statements periodically, and in turn, decreasing maintenance windows.
- Designed & Implemented a real-time MDR CE (Mobile Data Roam Correlation Engine) in C++, to match start & stop RADIUS messages and stream them to Vertica Database.
- Migrated two Visproactive releases (UniRoam & SS7GSM) from Oracle to Vertica 5.0.8.
- Participated in Vertica migrations from 5.0.8, to 5.1, and again to 6.1.
- Led team through Java 1.6 to 1.7 migration
- Profiled, Monitored & Tuned dev/test/prod systems with hundreds of JVMs to manage network connections, memory usage, and to minimize GC activity.

Work Experience

Syniverse Technologies (continued)

Contributions to enterprise architecture company-wide:

- Led VPA team through pilot SCM migration from Telelogic Synergy to Subversion 1.6. Based on our successful experience, all products under active development within Syniverse were migrated to Subversion server (with WANDisco plugins).
- Introduced use of Jenkins for CI/CD infrastructure to build software hosted in Subversion. Based on successful experience with VPA team the centralized built team adopted Jenkins to bring CI/CD to rest of company.

Backend Development performed for other products (2001-2010)

- STARS (Streamliner Terminal Access Reporting System)
- CNAM-LIDB (Calling Name & Line Information Database),
- MDR (Mobile Data Roaming)
- AAA Broker (Authentication, Authorization & Accounting).

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-syniverse>

10/1999 — 04/2001 TAMPA, FL, US

Owner & Principal Consultant LinuxTampa.com

Custom software development using Linux, BSD and other open platforms. Projects included:

- Embedded systems, including the world's first Linux-based ATM cash machine. KDE/Qt/C++ on RHEL 5.
- Created a Java/SWT desktop application for managing police dashcam videos and accompanying GPS travel logs, deployed on Fedora Linux.
- Implemented custom Day-trader stock monitoring for Australian Stock Market (using iguana2.com's Spark API) - C / C++
- Webhosting services (LAMP Stack) on co-located physical servers and virtualized VPS systems. Managed about 80 domain worth of mostly-static content. Mostly HTML/PHP.
- Ported legacy applications from ancient and closed commercial Unix systems to the brave new open world, targeting Linux as new platform. Mostly C, Python, PHP.
- Created a backend for an internet to generate Windows Media Players skins with artist-specific artwork, embedded lyrics, and Javascript logic to display lyrics within media player synchronized to the music currently being played. PHP/JS.

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-linixtampa>

Work Experience

02/1998 — 08/1999 TAMPA, FL, US

Software Designer / Informix DBA Perot Systems / Technical Resource Connection

NOTE: Perot Systems was later acquired by Dell

Client: Eagle Asset Management: <https://eagleasset.com>

- Handled a Y2K remediation / conversion project
- Migrated a financial securities management application called GIM-II from an old Sequent/Informix-5 environment to a new Solaris/Informix-7.3 cluster, upgrading the application version as well.
- Sifted through hundreds of locally-developed Informix 4GL programs and custom shell scripts. Ported and re-implemented them as appropriate, while discarding unused scripts.
- Created logical/physical mappings of their largest, most active Informix tables across 5 mirrored drives in a way to distribute I/O amongst the devices.
- Create database migration processing script driven by GNU Make's parallel execution feature (minus-j switch) to take advantage of multiple CPUs.
- Implemented a new real-time data feed in Java from Bloomberg's finance server to GIM-II's pricing table.

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-perot>

08/1998 — 01/1998 DUNEDIN, FL, US

C++ Software Engineer Nielsen Media Research

Software maintenance for Galaxy Explorer report server in C++ (for TV ratings industry).

09/1995 — 02/1997 ORLANDO, FL, US

C++/X-Windows Software Developer Technisource / Lucent / AT&T

Client: AT&T Microelectronics / Lucent Technologies

- Created Application framework called ACE for automating semiconductor manufacturing equipment. Implemented in C and X11/Motif on Solaris 5.x.
- Created ACE framework enabled development teams for specific equipment to easily implement custom X11 GUIs for each factory station, that also communicated station status to central process control.

Key features of ACE framework (all on Solaris 2).

- The "flat-embedding" of xterm terminal processes (using Xlib's XReparentWindow function in such a way that they appeared to be part of the primary ACE window, but were in fact, subprocesses).
- Multiple tabs (before browser had them), allowing factory workers to easily switch between multiple xterm processes and pluggable X11 modules specific to each station's equipment.
- Macro record and playback capability to allow ACE to programatically cut-and-paste from one terminal process into another. This eliminated errors from human mistyping, and reduced equipment idle times between batches.

Work Experience

Technisource / Lucent / AT&T (continued)

ACE was successfully deployed to both chip factories in Orlando (a 6-inch wafer fab, and a newer 8-inch wafer fab), and then later to similar chip factories in Spain, Singapore and Thailand. Supported chip fab processes included: plasma etch, lithography, deposition, ionization, furnace, cleaning/polishing, & wafer cutting, wet/dry etch, lithography, photo-mask, chemical deposition, ion implant, and final die cut processing.

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-lucent>

05/1992 — 08/1995 PALM HARBOR, FL, US

C/Unix Software Developer Transportation Systems Consulting

- Joined as entry-level C/Unix developer for continuing development of large ncurses-style terminal application called AMIS-2000. AMIS helps aircraft operators fulfill the record-keeping requirements of aircraft maintenance mandated by the American FAA (Federal Aviation Authority) and the British CAA (Civil Aviation Authority).
- Produced highly portable code to run on a variety of commercial Unix and open-source Linux/BSD platforms (most Unix vendors from this era had their own proprietary compilers instead of simply using gcc).
- Implemented changes to dozens of CRUD screens & printed reports as directed.
- Created alternative implementations of AMIS's database API (originally version interfaced to Unify-2000 RDBMS). These enabled AMIS to be sold to new customers already using other databases such as Informix and Oracle 6.x/7.x.
- Implemented the printing of barcodes on AMIS maintenance reports to speed data-entry when signed forms return from the hangar floor. The print driver I wrote supported 3 or 4 different dot-matrix printers that were in use at the time.
- As customers began accessing AMIS via PCs running telnet clients instead of serial-port dumb terminals ("green screens"), I modified our ncurses wrapper to take advantage of the PCs ability to display certain kinds of text dialogs in appropriate colors (errors in red, warnings in yellow, notifications in green, data fields in a different color than field labels).

Additional tech details for this role:

<https://bailey-jones.com/post/resume-details-tsc>

Projects

04/2013 — PRESENT SAN ANTONIO, FL, US

Webmaster

GoTonight.com

GoTonight.com is LIVE local music search engine serving the Florida market. The main site was written in Adobe ColdFusion with a MSSQL database. The HTML/CSS is old-school table-driven code that looks good on desktop, but is not mobile-friendly or responsive. Over the years, I have added:

- password reset functionality (links sent via email).
- salted/encrypted passwords (previously there were in plaintext)
- support for "streaming-only" events to support local, live musicians throughout the COVID-19 shutdowns in 2020-2021.
- "fuzzy-match" feature to notify site owners of new bands & venues that have similar names to existing entities.
- automatic lat/long lookup & storage of venue addresses at add/modify time, to assist in geographic radius search function.
- recurring database dumps from production DB to a backup DB in case of outage at hosting provider.
- caching of Google's geocode/geoaddr API responses in MSSQL
- isolated development environment for upwork contractors.

I removed dependencies on flaky ODBC drivers in PHP portions of gotonight's admin console, which are used by the Gotonight Mobile App for Android. I also performed a MSSQL 2014 to 2019 upgrade in 2020 to support the use of additional SQL soundex functions and SSL connections to the database.

My main work for gotonight.com since leaving McKinsey (2/2024) is a **fully remote-first/responsive React GUI** that will be used both by most public-facing users. I wrote the **microservice backend for this new UX in Golang, and I host it in GCP's CloudRun container service behind a load balancer**. The microservice reads from the legacy MSSQL database, and gets updated upon pushing commits via GCP's CodeBuild service. I wrote the IaC for all of this in opentofu (the open-source successor to Terraform).

The new GUI is in beta at: <https://gtdev.bailey-jones.com>

Publications

My LinkedIn Profile

<https://linkedin.com/in/timbaileyjones>

TimCodes (my tech blog)

<https://timcod.es>

Bailey-Jones (my career blog)

<https://Bailey-Jones.com>

Includes more technical details about some past roles.

My AWS Articles @ Stelligent

<https://stelligent.com/author/timbaileyjones/>

Social Media



LinkedIn

X / Twitter



GitHub



Facebook

Other Interests

- Brass Instruments
- Classical Music
- Home Improvement
- Rural Living
- News / Economy
- Technology
- Languages (some Spanish and German)