Staff/Principal Software Engineer

With expertise in multiple programming languages spanning frontend and backend development, I've spearheaded the design and implementation of numerous features, collaborating seamlessly with diverse teams to ensure successful project delivery. Passionate about mentorship, I've enjoyed guiding others through their career journeys, fostering a culture of learning and growth. Now seeking a dynamic environment where I can continue to expand my skills and contribute to impactful projects, I'm eager to join a team that values innovation and offers opportunities for personal and professional development.

Experience

Senior Member of Technical Staff – Broadcom Inc. (formerly VMware)   June 2023 – Present

Worked within the End-User Computing group to modernize the Workspace ONE Unified Endpoint Management (UEM) product. Participated in regular SCRUM activities including daily standup, grooming, code reviews, etc. Also participated in design review discussions for major new features being developed.

Highlights

- Create validation tool to ensure data translation and synchronization between two systems is correct and consistent. Several major issues were uncovered which were able to be fixed before production release.
- Identified potential security issues in design review discussions so that issues could be mitigated during design rather than implementation.
- Help with identifying and resolving build problems for applications across the organization.

Senior Software Engineer – Meta Platforms, Inc.   March 2022 – June 2023

Developed internal application framework Bloks allowing developers to define user interface elements and logic in Hack which is then transferred to client applications for execution, allowing real-time update of native client application logic.

Highlights

- Created tool to pull inline documentation from Hack code and import into a wiki, similar to javadoc or documentation generators for other languages. This was later adopted by other teams to pull their documentation into their wikis.
- Worked with internal teams to identify and problems and improvements within the Bloks framework.
- Improved and cleaned up several aspects of build process, including modifying the schema build process to use less data along with being more reliable.
- Worked with internal A/B testing framework team to add features needed to integrate it with the Bloks framework.
- Implemented internal A/B testing framework with Bloks.

Software Architect – NCR Corporation   July 2019 – March 2022

Architect for SRE team consisting of about 20 developers which managed the cloud infrastructure for NCR's Business Services Platform. The Business Services Platform is a collection of backend services used for authentication, catalogs, ordering, and other data management services, which enables third-party services such as GrubHub complete a large volume of orders daily, even during peak times such as the Super Bowl. Helped development teams consisting of around 100 people with best practices, deployment pipelines, dockerizing their applications, as well as other general issues they may encounter.

Highlights

- Designed and managed cloud migration from AWS to GCP, and advise/help other business units with their migrations.
- Created terraform modules that abstracted the finer details of GCP from DevOps developers on development teams to standardize environments and allow teams to get up and running as quickly as possible.
- Created "slackbot" from scratch to allow use of rich forms in Slack as well as a possible future migration to Microsoft Teams. Ultimately this was used to allow several workflows to be completed entirely from slack, including ticket creation and approvals for deployments.
- Created framework that reaches out to various external systems in parallel to gather statuses for deployment readiness, such as checking code scanning results, uptime, and other factors.
- Provided technical guidance both internally on the SRE team as well as to other development teams within NCR.
- Worked with other business units with their migrations into GCP

Technical Lead – NCR Corporation   July 2018 – July 2019

Oversaw development of the NCR Developer Experience (developer.ncr.com), which allows developers to view documentation of NCR APIs as well as management of their organizations within the platform. There additionally is an internal interface to allow NCR administrators to manage the platform.

The NCR Developer Experience team consisted of 6 developers and a product owner.

Highlights
- Performed regular Agile development duties such as daily standups, code reviews, grooming sessions, commitments, and end-of-sprint demos.
- Provide technical guidance during grooming sessions, commitments, on complex work items, etc.
- Help team members by providing individualized or group help when needed as well as holding informational meetings to go over complex topics.
- Track down difficult to find or reproduce problems via local debugging and/or logical analysis of application source code.

Senior Software Engineer – Tin Roof Software (contractor for NCR Corporation)   December 2017 – July 2018

Developer on the NCR Developer Experience development team. See Technical Lead position above for more details.

Application Architect – TalentQuest (Corporate Psychology Resources, Inc.)   February 2015 – December 2017

Oversaw development of TalentQuest's self-named application, which is an application primarily used by HR departments to conduct HR-related activities such as behavioral assessments, performance management, performance reviews, compensation reviews, etc. TalentQuest is used by hundreds of organizations across the United States to manage their employees.

At its height, the TalentQuest development team consisted of two US-based teams of 3 developers (including the team lead) and two QA engineers, along with four India-based teams of similar size.

Other positions held during tenure: Technical Lead, Senior Software Engineer.

Highlights
- Oversaw user interface redesign project which revamped the look and feel of the application as a whole. This was done in phases and with toggles such that the new interface could be enabled and disabled at will.
- Create technical design documents for new features to be implemented by the development teams.
- Rewrote backend of compensation appraisal calculation engine to improve performance.
- Optimize user interface to increase site responsiveness as well as to implement accessibility requirements.
- Integrate Angular 1.x (later upgraded to Angular 4) and WebAPI into existing ASP.NET MVC application.
- Performed regular Agile development duties such as daily standups, code reviews, grooming sessions, commitments, and end-of-sprint demos.
- Provide technical guidance during grooming sessions, commitments, on complex work items, etc.
- Help team members by providing individualized or group help when needed as well as holding informational meetings to go over complex topics.
- Track down difficult to find or reproduce problems via local debugging and/or logical analysis of application source code.

Team Lead – Rev.io August 2009 – February 2015

Oversaw development of Rev.io's self-named application, which provides telecom billing services to hundreds of companies across the United States. It includes most functionality a telecom company would need, from call rating, billing customers, allowing customers to make payments, automated top-ups of wireless minutes, etc. Rev.io processed hundreds of thousands of billing and rating events per day, with a subset of those events needing to be processed in real time (for instance to cut off service once a user reaches their minute allotment).

The development team at Rev.io consisted of around 8 developers.

Other positions held during tenure: Senior Software Engineer, Software Engineer, Software Development Intern.

Highlights

- Lead professional services team that regularly billed around $50k per month in revenue with a development team consisting of 3 people.
- Worked directly with customers to gather requirements and to train them on new features that were implemented. Also worked directly with customers to solve problems they may be having as well as identifying workarounds while fixes were being developed.
- Ensure that development commitments made to clients were reasonable and completed on time.
- Create technical design documents for new features to be implemented by the development teams.
- Help team members by providing individualized or group help when needed as well as holding informational meetings to go over complex topics.
- Track down difficult to find or reproduce problems via local debugging and/or logical analysis of application source code.
- Regularly worked with third-parties for integration, such as with carriers (Verizon, AT&T, etc.) and payment gateways (Authorize.Net, Stripe, PayPal, etc.)
- Handled various system administration tasks such as general Windows and Linux administration, Microsoft SQL Server, IIS, third-party application hosting such as Jira, Confluence, etc., as well as the office phone system and provisioning of Cisco phones.

Education

Master of Science in Computer Science / Software Engineering December 2015
University of West Florida – Pensacola, FL

Bachelor of Science in Computer Information Systems May 2010
University of West Florida – Pensacola, FL

Associate of Arts in General Studies May 2008
Northwest Florida State College – Niceville, FL

Open Source Contributions

Tailscale
Project URL: https://github.com/tailscale/tailscale
Language: Go

Fixed obscure bug resulting in DNS being lost with certain configurations on Linux.

Jellyfin
Project URL: https://github.com/jellyfin/jellyfin
Language: .NET Core, C#

Fixed legacy SiliconDust HDHomeRun implementation for LiveTV.

Personal Open Source Projects

Ham DB
Project URL: https://github.com/ryanpetris/ham-db
Language: Python

Application to provide an API for looking up Amateur Radio licenses. Data is synchronized daily with the US FCC and Canadian ISED amateur radio databases, along with DMR and NXDN IDs from radioid.net. A reference deployment is located at https://api.hamlocator.com/.

AUR Builder
Project URL: https://github.com/ryanpetris/aur-builder
Language: Go

Helper to track and build AUR packages for the Arch Linux distribution.

DNS-Sync
Project URL: https://github.com/ryanpetris/DNS-Sync
Language: Python

Enables synchronization to/from a standard zonefile and dns provider or between dns providers.

IgnoreFS
Project URL: https://github.com/ryanpetris/ignorefs
Language: Python

FUSE filesystem that is essentially a bind mount with the ability to ignore files using .gitignore style syntax.

IOT Director
Project URL: https://github.com/ryanpetris/IOT-Director
Language: .NET Core, C#

Talks to Arduino Devices programmed with IOT Director – Arduino to get digital and analog sensor data as well as controlling relays. This information is then used to talk to an MQTT server that interfaces with HomeAssistant. This is ultimately used to interface with door and window sensors, smoke alarms, motion detectors, and devices that need a simple on/off signal such as sirens.

IOT Director – Arduino
Project URL: https://github.com/ryanpetris/IOT-Director-Arduino
Language: C

The Arduino component of IOT Director. Requires an Arduino with an ethernet shield.

HdhrProxy
Project URL: https://github.com/ryanpetris/HdhrProxy
Language: .NET Core, C#

Proxies requests to legacy SiliconDust HDHomeRun devices to allow channel scanning and channel listing capabilities bypassing the use of SiliconDust's online services.

Disposamail
Project URL: https://github.com/ryanpetris/disposamail https://github.com/ryanpetris/disposamail-ext
Language: NodeJS/JavaScript

Software to create a disposable email address ala Guerrilla Mail, Mailinator, etc. There are two versions: one that uses an internal SMTP server to receive mail, and another that uses an external services such as Mandrill.