Avi Flax

Seeking Senior Software Architect Role*

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I design, build, and operate **software systems and teams** that solve **real problems** and make a **positive difference** in the world.

I believe that values matter.

▼ More Values

I believe that diversity and inclusion are crucial *and* create rich, healthy, sustainable, productive communities (companies).

I believe that <u>DRY</u> and <u>the Rule of Three</u> apply to docs just as much as code.

I believe that people can only do great work if they are healthy, growing, supported, and respected.

I believe that all great processes have one thing in common: they are regularly reviewed and refined.

I believe that the only thing that matters about any technology is its potential to solve problems.

I believe that technology is a phenomenally powerful tool that we humans have at our disposal to solve problems — if we so choose.

I believe that we humans do some of our best thinking while *communicating* — so let's do more of that.

I believe that institutional/communal memory is critical to building sustainable organizations.

▼ Current Position

2016–Present

Principal Software Architect at Park Assist

- Facilitating the company's transition from execution phase to growth phase
- Increasing collaboration and cohesion of the engineering team
- Establishing roadmaps for all systems
- Designing, building, and operating:
 - streaming data pipelines conveying data from sites around the world to a central data center
 - stream data topologies using <u>Kafka</u> and <u>Kafka Streams</u> to effect high-throughput and low-latency data-centric applications
- Driving adoption of:
 - infrastructure-as-code, configuration management, and immutable infrastructure with <u>Terraform</u>, <u>Ansible</u>, <u>CircleCI</u>, <u>AWS</u>, and <u>Kubernetes</u>
 - consistent conventions around testing, documentation, code review, and continuous integration
- Operating services with Terraform, Ansible, AWS, and Kubernetes, Datadog, Slack
- Defining and executing new approaches to:
 - engineering support
 - team structure
 - hiring
- Create a culture of caring about sustainability, documentation, and maintainability
- Introducing and championing new:
 - o development tools: GitHub, Terraform, CircleCI
 - o company-wide communication media: <u>Slack</u>, <u>Discourse</u>
- Mentoring those new to software engineering

▼ Prior Experience

2015: Timehop

- Refactored a critical and complex system into a loosely-coupled stream-based system using Kinesis and Go (<u>slides</u>)
- Designed and implemented sophisticated integration with Twilio for SMS-based signup
- Designed and implemented a large-scale data processing tool to process billions of records very quickly

2014: Thinkful

• Designed and implemented an event-driven system to automate Stripe subscription management

2013-2014: SFX Entertainment

- SFX acquired Arc90 in 2013 to be its internal app design and development group
- I initially adopted the title CTO, then recruited <u>someone amazing</u> to replace me and shifted to *Chief Sofware Architect*
- I helped design and build an ambitious new-from-the-ground-up streaming music platform and integrate it with existing products
- I helped shape the organization by helping craft its structure, practices, culture, goals, communication, and approach
- I recruited key personnel

2005-2013: Arc90

- Arc90 was a Web application design & development consultancy; it was acquired by SFX Entertainment in 2013
- Wore many hats: developer, architect, team leader, partner, director
- Worked with teams to design, build, and maintain sophisticated software platforms, including:
 - A Web/SOA insurance platform covering all key aspects of policy origination and management
 - A Web-based search engine and reference platform for engineers
 - An API at the heart of a new-from-the-ground-up news distribution platform for Reuters
- Conducted technical audits of clients' acquisition targets
- Helped manage the business as a partner
- Managed client relationships
- Invested much time and effort in recruiting and retaining exceptional team members
- Started practice of regular company-wide code review

2001-2004: ADP

• Refactored, enhanced, and maintained a sophisticated application for producing custom financial documents for on-demand printing

2001: Register.com

- Team lead position for large high-traffic auction site
- Responsibilities included designing, implementing, and maintaining features; and reengineering site technology and architecture
- Created new internal tools and development procedures

2000: RewardsPlus

• Maintained and enhanced a large-scale online employee benefits enrollment system for diverse clients with diverse needs

1998-2000: Words In Progress

• Developed requirements and specifications for high traffic websites directly with clients; crafted application architecture and database design

1998: Ideal Computer Strategies

 Worked with teams of designers, coders, and project managers to concurrently develop and deploy client websites with basic dynamic features

1997-1998: PCC Internet Design

• Founded and managed a small web design shop in Pikesville, MD providing full-service web design and development to small companies in the Baltimore area

▼ Examples

- My current (stalled) side project is <a>Omnia, a system to search multiple document silos at once. Warning: under construction!
- A prior (stalled) side project is <u>GitHub Digests</u>, a system to aggregate GitHub notifications into daily email digests. (If you check it out, please keep in mind that it's only 10% built and I was new to Ruby!)
- Another prior side project was <u>Three Things</u>; I published <u>a post</u> telling its story.
- I've been collecting resources for learning stream processing since August 2014.
- In 2013 I published <u>Resourceful</u>, a Clojure library that provides a more concise and more RESTful alternative to declaring routes.
- My last major project for Arc90 was to build a new platform for reuters.com:
 - o I created a diagram of the overall architecture of the "Reuters Next" platform
 - I was asked to review a draft of the API spec; I provided these notes
 - I developed <u>a document</u> to capture the culture and process of my team, so we could ramp new members up quickly and effectively
 - I determined that the API codebase I had inherited needed to be refactored, and wrote <u>this summary</u> to explain why
 - When I left the project I shared <u>my parting thoughts</u> with the team
- I sometimes perform technical audits of existing applications or platforms. Here's <u>one example</u>; I can provide more extensive examples upon request.
- I sometimes write blog posts:
 - <u>Kafka Summit 2017 Talk Proposal</u>
 - Strange Loop 2016 Recap

I'd be happy provide more examples of my work, such as architecture diagrams and presentations, business analysis, code, etc. Just get in touch!

▼ Key Skills

• Problem analysis

- Software design, architecture, construction, deployment, and operation
- Deep expertise in the World Wide Web and HTTP
- Web API design & development
- Product design
- Data engineering
- Team/organizational leadership

See also Additional Skills below.

▼ Key Technologies

- Amazon Web Services (AWS)
- <u>Clojure</u>
- <u>DynamoDB</u>
- **Go**
- Java
- Kafka
- Kinesis
- <u>Kubernetes</u>
- Lambda (AWS)
- Python
- Ruby
- Terraform

See also Additional Skills below.

▼ Around the Web

- Blog
- <u>Twitter</u>
- Bookmarks
- <u>Instapaper</u>
- Stack Overflow
- GitHub

▼ Additional Skills

- Behavior Driven Development
- Browser APIs
- Business analysis
- CoffeeScript
- CouchDB
- <u>Datomic</u>
- DB Design
- Django

- ElasticSearch
- Flask
- Groovy
- Information architecture
- JavaScript
- Markdown
- MongoDB
- Node
- OmniGraffle
- PostgreSQL
- Restlet
- SQL
- Solr
- Stripe
- UX design
- XML/XSL/XSD/XQuery

▼ Hobbies

- Auto racing (autox)
- Cycling
- Hiking
- Reading
- Video games

Thanks!

Thanks for scrolling all the way to the bottom of my résumé! I appreciate your interest. At this point, you might want to get in touch. Please do!

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* Or something like that. I'm not hung up on titles; I'm more interested in what I do. If you have a need in that ballpark, please get in touch!

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