

# Ry4an Brase, Software Developer

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Builder of great teams and software. Relentless attention to detail throughout the software development life cycle. Keen focus on process, tooling, team dynamics, and measurable outcomes. 15+ years experience in startups and large organizations. Comfortable as an individual contributor or a team leader.

## Work

### **Principal Software Engineer, Duo Security, 2016 - Present, Ann Arbor, MI**

Duo provides human-friendly security for all the best tech companies and an ever increasing swath of enterprise too.

- Still figuring it out...

### **VP of Engineering, DramaFever, 2012 - 2016, New York, NY/Philly, PA**

DramaFever, a Warner Brothers company, develops and customizes a streaming video platform powering many popular video sites.

- Managed a team of 40 engineers, with responsibility for mentoring, roadmap, procedures, and interactions with product teams and executives
- Developed customer facing and backend features on a Django + JS stack
- Increased search efficiency by implementing Swifttype for in-site search and autocomplete
- Built video analytics system with millions of data points per day analyzed using Amazon DyanamoDB, Elastic Map Reduce (Hadoop / Hive), and Redshift cutting reporting time from days to minutes
- Instituted processes and tooling with GitHub, standard branching practices, continuous integration (Jenkins), and code review
- Increased monitoring with New Relic and Graphite

### **Developer, 8thBridge, 2011 - 2012, Minneapolis, MN and remote**

EighthBridge, since acquired by Fluent, pioneered e-commerce within social media sites.

- Developed and debugged software for high-volume, high-reliability transaction processing with highly variable input and data store requirements
- Conducting code reviews for security and correctness using GitHub and JIRA/Crucible
- Helping to manage large Amazon EC2 deployments using Chef for automation and Jenkins for builds and deploys
- Using NewRelic, Cacti, Graphite, Splunk, Snort, Pingdom, Akamai, Cloud Front, PagerDuty, and BrowserMob to ensure always-on availability
- Primary point of contact for PCI-DSS certification -- one of the first on Amazon Web Services / Elastic Computing Cloud (AWS-EC2)

### **Developer, Minnesota Supercomputing Institute, 2010 - 2011, Minneapolis, MN**

- Work with bioinformatics, genomics, and physical science investigators at the University of Minnesota to apply massively parallel computing resources in the furtherance of their research
- Modify and consult on projects in Java, Python, Perl
- Designed and deployed University-wide Galaxy bioinformatics framework offering

### **Co-Founder and Lead Technologist, Swarmcast, Inc., 2002 - 2010, Minneapolis, MN**

Swarmcast invented and commercialized modern segmented video streaming.

- Built a team of 15 engineers from the ground up: set their goals, selected their tools, crafted their environment, defined their procedures, and oversaw quality for multiple public launches
- Reliably designed and delivered customer-facing, groundbreaking, HTTP-based, live video delivery software, both client and server systems, on time and under budget
- Personally authored core pieces of multiple server-side and client-side products licensed by Major League Baseball, Siemens, Comcast, and Roku
- Oversaw professional services groups in North America, Europe, and Asia. Tasks included contracts, project scheduling, resource allocation, and customer relations including international travel
- Managed the patent pipeline, yielding 6 fully granted in the US and internationally

#### **Developer, Open Cola, 2000 - 2001, Toronto, ON**

- Created original multi-source P2P file transfer system in Java using forward error correction
- Brought much needed structure in the form of source control and bug tracking database
- Worked closely with local and remote employees in a principally telecommuting position

## **Skills**

### **Software Development**

- Expert-level development in Python with emphasis on network programming, particularly HTTP
- Track record of solid design and on-time delivery of highly maintainable code
- Debugging skills using network protocol analyzers, debuggers, and profilers
- Strong emphasis on mentoring through code review and one on one coaching
- Contributed to many open source projects including: Bugzilla, Mercurial, Chef (newrelic cookbook), Galaxy, dircproxy, blohg and a CPAN module
- Codes in: Python, Java, Perl, Scala, C, C++, JavaScript, and bash
- Tools: Mercurial, git/GitHub, Chef, Docker, Jira, Bugzilla, Jenkins, Apache, Varnish, HAProxy, Wireshark, PostgreSQL, MySQL, Subversion, Puppet, Hadoop, Hive, Redshift, and etc.
- Platforms: Linux, UNIX, OS X, Google App Engine, Amazon Web Services

### **Software Development Management**

- When managing teams of skilled software developers, strikes the right balance between providing not enough guidance or too much control, and helps them to navigate the re-code vs. re-use vs. buy decision point
- Led multiple successful iterations of customer requirements gathering, design, development, and delivery while working solo, on a team, and as a team lead
- Responsible for the creation and management of successful product teams, both local and remote

### **Operations/Infrastructure Support**

- Setup and handled developer training for source control, bug tracking, continuous integration, and automated deployment systems
- Actively fostered a culture of documentation inside and alongside code using wikis, generated documentation, task tracking, and bug tracking
- Aggregated and authored accurate, insightful status reporting to internal and external development customers

## **Patents, Writing, Projects, and Links**

- This [Resume](#): [Text](#), [PDF](#), [HTML](#), [Repository](#), [Making Of](#) (You have revision [13f4954f80a8](#), updated 2016-08-08)
- Patents (bought by Google): [7979570](#): Live Media Delivery Over a Packet-Based Computer Network, [8543720](#): Dynamic Bit Rate Scaling, [8635360](#): Media Playback Point Seeking Using Data Range Requests, [8150992](#): Dynamic Media Bit Rates Based On Enterprise Data Transfer Policies, [7788398](#): Media Player Plug-in Installation Techniques
- Projects: Are [Blogged](#) and at [BitBucket](#) or [GitHub](#). Contributed to Mercurial, Jetty, Bugzilla, Galaxy, dircproxy, blohg, and assorted small open source projects
- [SwarmStream](#): A Next-Generation HTTP Stack for Java - O'Reilly (2005)
- Early projects at Freshmeat - <http://freshmeat.net/users/ry4an>

## School

**University of Minnesota, Institute of Technology, 1995 - 2000**

B.S. Computer Science