

Ryan Spangler

Curriculum Vitae

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All things

Technology

Languages Clojure, ClojureScript, JavaScript, Python, Ruby, C++, Java, Bash, SQL, Matlab
Areas Biological Modeling, 3D Animation, Machine Learning, Generative Music, Applied Mathematics, Web Sorcery

Relevant Experience

2007–2014 **Senior Developer**, *Instrument*, Portland OR.

I work with the labs team to invent constantly — be it creating flexible tools other teams use to build projects, prototyping and executing interactive experiences or simply pure experimentation.

I explore novel approaches using code that demonstrate previously unknown possibilities and then facilitate how they can be harnessed for practical applications.

Achievements:

- Created Caribou — an open source Clojure web ecosystem for building large high-performance web applications with great alacrity: <http://let-caribou.in>
 - Lead an interdisciplinary team in developing a large open source project
 - Managed an open source community by constructively listening to feedback and reviewing and merging pull requests
 - Modularized the code base by extracting useful features into stand alone libraries
 - Mediated and communicated effectively between technical and non-technical individuals
- Created Cyclops — a tool for interpolating data for use in programmatically driven animations: <http://cyclops.weareinstrument.com>
 - Applied a variety of mathematical methods to a practical problem
 - Eliminated the need for developers to recreate the work of motion designers
- Built Schmetterling — a browser-based debugger for inspecting running Clojure programs: <http://github.com/prismofeverything/schmetterling>
 - Gained insight into the methods of controlling and manipulating a running process
 - Built an asynchronous browser-based websockets interface to a service running on the backend
- Pioneered a workshop for learning 3D programming: <http://weareinstrument.com/3d-workshop/index.html>
 - Innovated new processes for learning and collaborative development for developers from a spectrum of skill levels
 - Focused activities to produce libraries and practical applications that find use beyond the workshop

2006–2007 **Programmer**, *Performance Logic*, Portland OR.

I learned the fundamentals of real world development using C++ while simplifying and modularizing a large legacy code base.

Achievements:

- Built a variety of visualization methods for generating reports from large data sets
- Enhanced the custom scripting language with features from functional programming
- Gathered sprawling instances of similar functionality and consolidated into clear, simple modules that could be reused everywhere

Education

2009–2012 **Master of Science, Systems Science**, *Portland State University*, Portland OR.
Computational Neuroscience, System Dynamics

2002–2005 **Bachelor of the Arts**, *The Evergreen State College*, Olympia WA.
Math, Performance, Computer Science

1999–2001 **Undergraduate Study**, *Oberlin College*, Oberlin OH.
Cognitive Science, Computer Science

Relevant Activities

- 2013 EuroClojure - Attended international conference in Berlin for all things Clojure
- 2013 Portland Clojure User Group - Member of a local community meetup for discussing and sharing Clojure knowledge
- 2012 Systems Science Seminar - Gave talk on the Nature of Assumptions
- 2011 OSCON - Attended convention for open source software in Portland OR
- 2011 Codex - Co-lead community workshop on creative coding and programming art

Interests

- Music Piano Tuning, Music Theory, Performance: Exploring the space of all possible musical events and relationships.
- Biology Molecular Biology, Cell Biology, Systems Biology: How does life work? How is this possible?
- Go The ancient game of life and death. I have learned many things about life from Go.
- Naming Word Creation: Words have to come from somewhere. How about the Omnivoplax?

References

- | Name | Contact |
|-------------------|---|
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(more upon request) |