

# Jacob Sandlund

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Software engineer with eight years of experience working on both large production systems and customer facing UIs, seeking to join a mission oriented team working on challenging problems.

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## Work Experience

### Figma

*Software Engineer*

San Francisco, CA  
October 2019 - July 2020

- Developed and maintained a TypeScript/C++ codebase for a web-based design editor.
- Built a feature that gave plugins limited control over the panel UI, collaborating with designers and other engineers.
- Debugged GPU issues in rendering code, adding tracing to make the process easier in the future.

### Spacetime (working title)

*Independent Researcher/Developer*

San Francisco, CA  
October 2018 - July 2019

- Researched and designed the beginnings of a visual programming language, based on my prototype demoed at an academic conference (SPLASH / FPW 2015).
- Rendered millions of hexagons to the screen using low level web technologies.

### Braintree

*Software Engineer*

Chicago, IL  
November 2013 - \* June 2018  
(\* 4 mo. gap for Recurse Center)

- Worked on a mission critical project to introduce a new sharding dimension to a giant codebase, and seamlessly cut over to the new shards with no downtime.
- Addressed a scaling issue with limited development time: replaced database queries on an overloaded table with in-memory lookups loaded from a file, obviating the need for a new microservice.
- Developed a new onboarding and login flow (both front end and back end), with an accompanying service to run A/B tests to see onboarding funnel impact.
- Helped build a service to selectively route traffic from a legacy system to a new system, working with load balancing technologies and infrastructure.
- Joined a new data engineering team to address existing warehouse scaling problems while working on a new data lake built on S3.

### Khan Academy

*Software Intern (after full-time job at Caterpillar)*

Mountain View, CA  
June 2013 - August 2013

- Created new interactive exercise widgets, and also extended existing ones: a widget that

categorizes items into groups, and an interactive graphing tool.

## Caterpillar

*Design Engineer (full-time job)*

Peoria, IL

*July 2011 - March 2013*

- Developed and maintained embedded C software for engines.
- Within five months of being hired led a small four person project to track and communicate exhaust fluid levels across two microcontrollers.

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## Skills

*Languages:* JavaScript, TypeScript, C, C++, Ruby, Python, Go, Java, HTML, CSS, Bash, SQL, VHDL, Lisp, PHP, Zig (learning)

*Libraries/Frameworks:* React, Node, Rails, D3.js, jQuery, Angular, OpenGL/WebGL

*Tools:* Command line, Git, Vim, Xcode, Docker, AWS, Terraform, Postgres, Nginx, Haproxy, Puppet, Valgrind, Emscripten

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## Education

### Bradley University

*B.S. in Electrical Engineering (GPA 3.96)*

Peoria, IL

*May 2011*