

Oliver Switzer

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Technical Skills

Programming Languages	Elixir/OTP	Ruby	Kotlin	Java	Python	JavaScript/TypeScript	Rust	C
	Arduino							
Frameworks & Platforms	Phoenix Liveview	Rails	Spring Boot	Node.js	React			
APIs & Data	MCP Protocol	GraphQL	REST	PostgreSQL	Elasticsearch			
	AWS (S3, Redshift)	GCP	Docker	Dolt	Kafka	Playwright	Helm	
	Terraform							
Practices	TDD/BDD	extreme programming	domain-driven design					
	agile & pair programming							
Machine Learning & LLMs	AI summarization	Stable Diffusion training	GraphRAG					
	Agent orchestration frameworks	n8n-based Agentic Workflow						
Fabrication & Electronics	3D printing	CAD (Fusion360)	Arduino/C	PCB & electronics design				
	soldering/assembly	parts sourcing & research	kinetic motion design					

Professional Experience

Sep 2023 - Present

Chief Technology Officer, Oddly Good

- Co-founded and scaled a creative engineering studio delivering custom experiential installations for retail, cultural institutions, and artists.
- Own full project lifecycle including client strategy, technical feasibility, budgeting, vendor coordination, and installation execution.
- Translate high-level creative vision into engineered systems that meet real-world constraints of cost, durability, and timeline.
- Built the operational and financial backbone of a project-based studio business.

Nov 2022 - Feb 2026

Staff Software Engineer, Mechanical Orchard

- Built Imogen, an agentic AI modernization platform that transforms legacy zOS batch systems for Fortune 500 enterprises using LLM orchestration, semantic code analysis, and automated equivalence testing.
- Led R&D and production delivery of developer tooling used for automated mainframe modernization, including GraphRAG retrieval and custom MCP servers for semantic search across COBOL, JCL, and Db2.
- Built distributed Elixir-based agent workflows to autonomously transform COBOL, high-concurrency Rust pipelines for Db2 replication with Kafka and Dolt, and production infrastructure with Kubernetes and Terraform.

Aug 2021 -
Oct 2022

Technical Lead, Kohort

- Built distributed, fault-tolerant Elixir/OTP systems powering real-time video, transcription, and collaborative editing experiences.
- Integrated early OpenAI beta LLM models into production pipelines for transcript summarization and semantic extraction, experimenting with prompt design, chunking strategies, and evaluation of output quality.
- Implemented ML transcript segmentation and topic change detection to enable structured summarization and improved model performance on long context inputs.

Oct 2020 -
Aug 2022

Software Engineer, Geometer LLC

- Worked with Elixir/OTP process architecture to provide real-time video, transcription and note editor experiences to users of a streaming video application.
- Collaborated closely with product and design teams to prototype and build features around automated ML transcript summarization and keyword extraction.
- Implemented a topic change detection algorithm in Elixir for the core streaming video application.

Jun 2018 -
May 2020

Senior Software Engineer, Kickstarter

- Built, shipped and iterated on full-stack user-facing features and A/B experiments.
- Mentored engineers around testing, object-oriented design patterns and extreme programming practices such as pairing and test-driven development.
- Introduced improved tooling and development processes to the engineering organization through multiple RFCs.

Aug 2015 -
May 2018

Software Engineer, Pivotal Labs

- Delivered full-stack features across multiple domains (finance, health care, charity, education) in a consulting setting.
- Taught XP practices including pair programming and test-driven development to client engineers and participated in user research sessions.
- Acted as engineering lead on projects, planning retrospectives and iteration meetings and facilitating communication between development teams and client stakeholders.

Aug 2014 -
Jun 2015

Full-stack Developer, littleBits

- Developed user-facing and internal tools using Rails, MySQL, React, jQuery, SASS, ERB, Spree and WordPress.
- Built the backend of the bitLab voting app with state machine and voting logic, and created an interactive circuit simulator using React.
- Implemented caching, in-app A/B testing and tracking frameworks to increase performance.

Apr 2014 -
Sep 2014

Full-stack Developer, HowAboutWe

- Wrote full-stack functionality using a Rails stack with jQuery/SASS/HAML and test-driven development.
- Built A/B tests, image upload and resizing scripts using Sidekiq and implemented worker queues for SMS messaging with Twilio.
- Integrated the Google Maps API to generate static map images from geographic coordinates.

Sep 2012 -
May 2013

Graphene Lab Research & Setup Coordinator, Bard College

- Pioneered the development of the first research laboratory at Bard College specializing in graphene heterostructures.
- Assisted in setting up equipment such as scanning electron microscopes, thermal evaporators and photoresist tools.
- Coordinated and tutored students in the lab and conducted senior project research on electrical interface effects between single and bilayer graphene.

Jun 2012 -
Aug 2012

Research Intern, Cornell NanoScale Science & Technology Facility (CNF)

- Undertook a ten-week research project fabricating and measuring a novel spin transfer device and presented findings to the National Nanotechnology Infrastructure Network.
- Grew and characterized graphene using Raman spectroscopy.
- Used a variety of clean room tools such as graphene furnaces, UV steppers, oxygen plasma etchers, sputtering systems, ion milling and E-beam deposition.

Education

- **Bachelor of Arts in Physics**, Bard College (2009-2013) - Distinguished Scientist Scholar; conducted thesis research on electrical interface effects of single and bilayer graphene.
- **Design Thinking & Social Entrepreneurship Workshop**, Stanford Institute of Design (d.school) / Project Breaker (2013)
- **Full-Stack Web Development Program**, The Flatiron School (2013)

Publications

Electricity in two dimensions: measuring electrical interface effects of single and bilayer graphene

Bard Digital Commons · Apr 1, 2013

My undergraduate senior dissertation on the quantum mechanical dynamics governing electrical transport in monolayer and bilayer graphene. Series of experiments conducted across Bard College and Columbia University electronics labs.

Spin Torque Ferromagnetic Resonance with the Spin Hall Effect

National Nanotechnology Infrastructure Network (NNIN) · Nov 3, 2012

Completed ten week-long research project on the fabrication of spin transfer devices culminating in a written research report and presentation at the National Nanotechnology Infrastructure Network (NNIN) convention in Washington, DC. The research report was published in the NNIN journal of 2012 Research Accomplishments.