
EXPERIENCE

PRISM BIO - HEAD OF AI, STAFF SOFTWARE ENGINEER

MAY 2023 - PRESENT

Led build out of Generative AI capabilities from scratch across top 5 pharma clients

- Discovered Alzheimer's treatment hypotheses at Genentech with automated NLP pipeline (NeurIPS GenBio '23)
- Sped up drug target reporting 20x for a JnJ lab with LLM-powered analysis and visualization web app
- Shipped "Knowledge Finder" web app: privately deployed document search and chat for life scientists
- Fine-tuned proprietary language models for clinical trial prediction, code generation, and report writing
- Tech: React, Typescript, Node.js, Python, Pytorch, Scikit, Postgres, Rust, AWS, Airflow, Kafka

SHOPIFY - LLM CRAFT LEADER, LEAD SOFTWARE ENGINEER

MAY 2022 - MAY 2023

Technical Lead / Advisor to nearly all of Shopify's large language model projects

- Built Shopify's first public-facing LLM app, rewriting the Help Center to utilize chat, tools, and vector search
- Unified Shopify's total internal knowledge across 40+ teams with a single NLP extraction pipeline
- Taught language model best practices by running multiple, cross-discipline workshops and talks
- Managed and mentored team of 8 software engineers, ranging from junior to senior
- Tech: Typescript, React, MySQL, Kubernetes, Python, Pytorch, GCP, Kafka, Ruby on Rails

DINA - SOFTWARE ENGINEERING LEAD

APRIL 2021 - MAY 2022

Led engineering and data science projects to improve at-home care for patients across the US

- Reduced hospital readmissions 75% at Bayada by shipping Health Scorecard ML model and web app
- Sealed a multi-million dollar deal with Redeemer Health by executing multiple complex data integrations
- Decreased Dina's hospital systems sales cycle 30% by securing patient record integrations w/ Epic, Cerner
- Spearheaded Dina's compliance strategy by migrating all web and data applications into private clouds
- Tech: Angular, NestJS, React, Typescript, Terraform, AWS, BigQuery, Postgres, Python, Elasticsearch

CASECHEK - SOFTWARE ENGINEERING LEAD

MAY 2018 - APRIL 2021

Built web, mobile, and analytics applications used in surgeries nationwide, managing a team of 5

- Achieved HITRUST, SOC2, and HIPAA compliance via multi-app cloud migration with 0 downtime
- Scaled Casechek front-end and backend applications to manage over 2M surgeries
- Achieved 100% automated end-to-end test coverage across all applications as automated testing SME
- Lead 3 major rewrite projects, upgrading stacks for legacy mobile, kiosk, and web applications
- Tech: Angular, NestJS, Typescript, React Native, Flutter, PHP, Postgres, AWS, Docker, Elasticsearch

FREELANCE - SENIOR SOFTWARE ENGINEERING CONSULTANT

JULY 2016 - MAY 2018

Full stack web development and team leadership consulting for small businesses and large corporations alike.

- Architected and shipped two large-scale, e-commerce front-end rewrites for Liftmaster, Chamberlain Group
- Increased traffic to Patak's brand site >200% by rewriting their legacy build in React, Node, MongoDB
- Shipped Google's first international SMB campaign by writing a serverless, IP-based location service in Node.js
- Saved BOMB Magazine from company-killing downtime by patching memory leaks in their Django site
- Tech: React, Node, MongoDB, MeteorJS, Laravel, PHP, MySQL, AWS (Infra), ASP.NET

EXPERIENCE

UPSHOT - DIRECTOR OF DIGITAL, LEAD ENGINEER

AUGUST 2014 - JULY 2016

Managed the 20-person Digital Department and all engineering initiatives for a Chicago marketing agency.

- Expanded Google business 50% by landing an engineering partnership to build with Google's dev teams
- Distributed 3M Spotify Codes in two days for Corona USA by rewriting a LAMP site into a real-time Node app
- Unlocked real-time updates all of Subway's digital menus by deploying web-socket servers into stores
- Increased Donut.inc's revenue 30% with MyRescue.Dog, a React/Node app that supported 300k users in 1 mo
- Reached over 10M people with digital advertisements and microsites for Proctor and Gamble products
- Laravel (PHP), JQuery, React, MongoDB, MySQL, ASP.NET, HTML, SCSS

OLENICK AND ASSOCIATES - TEST ENGINEER, WEB DEVELOPER

AUGUST 2013 - AUGUST 2014

Forward deployed engineering and testing consultant for multiple clients in energy, non-profits, e-commerce

- Won "Most Tests Written" and "Most Logged Defects" awards for Comed's emergency call center upgrade
- Led testing team for Comed's Smart Meter replacement, personally writing 400+ tests in a month (75%)
- Helped Illinois Veterans find jobs by shipping features and fixes for Illinois Joining Forces site as web dev lead
- Tech: Drupal, PHP, JavaScript, SQL, Oracle SQL, ASP.NET, HP Quality Center / ALM

META4 DESIGN - WEB DEVELOPER & UI DESIGNER

MARCH 2010 - AUGUST 2013

Lead web developer and designer for multiple projects for a Chicago marketing agency serving clients nationally

- Promoted cutting edge MRSA research by building the University of Chicago's MRSA Research website
- Supported Illinois wetlands preservation and promoted innovative nutrient farming by building web apps
- Helped recent mothers experiencing post-partum depression connect with therapists through mobile & web
- Tech: JavaScript, HTML, CSS

EDUCATION

BROWN UNIVERSITY MFA Literary Arts, Poetry	MACALESTER COLLEGE BA English, Poetry
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SEEKING

Engineering and leadership roles working with excellent coders to build distributed systems at scale.

SKILLS

- Full Stack Software Engineering
- Distributed Systems Design
- Engineering Management
- Large Language Model & NLP Training, Deployment, and Evaluation in Production
- GPT4, Claude, Open LLMs
- Data Engineering / Pipeline / Warehousing Infra
- Vector DBs, Retrieval Augmented Generation, Agents
- FE: React, Typescript, Remix, JavaScript
- BE: Node, Rails, NoSQL & SQL DBs, Kubernetes, BigQuery, Kafka, Spark, .NET
- ML: Python, Pytorch, Tensorflow, Scikit-Learn, NLP

RECENT PUBLICATIONS

"Identifying Neglected Hypotheses In Neurodegenerative Disease With Large Language Models"

NeurIPS '23 GenBio Workshop

Built LLM / NLP data pipeline to extract hypotheses from 9K papers and trials, then clustering, visualization, and LLM analysis to identify neglected but viable treatment hypotheses.

"Talk is Deep: Training LLMs on 1M Academic Conversations With Themselves"

Forthcoming.