

Matt Sears, PhD

 mattsears18.com

 mattsears18@gmail.com

 (859) 358-0908

 [mattsears18](#)

 [mattsears18](#)

 [matt-sears](#)

Full Stack Software Engineer | 10+ YOY | AWS Certified Developer

Skills

Engineering: Backend & Infrastructure, DevOps, Cloud Architecture, API Design & Implementation, Database Schema Design, Technical Specification Writing, Web Application Development, RESTful Web Services, Microservices, Containerized Applications, UI/UX, Software Design & Coding, Object Oriented Design, Testing & Code Coverage, CI/CD, Software Quality, Technical Debt Reduction, Scalability, Performance, Reliability, Data Structures and Algorithms, Code Reviews, Pair Programming, Documentation, Agile/Scrum

Leadership: Strategic Planning & Execution, Technical Project Management, Coaching & Technical Mentorship, Engineering Culture Building, Process Improvement, Cross-functional Collaboration

Technologies: TypeScript, JavaScript, SQL, PHP, Python, Dart, Java, C++, R, Remix, Next.js, React, Node, Express, Meteor, Electron, Laravel, Flutter, Vercel, Hasura, GraphQL, REST, Twilio, Retreaver, AI/ML, Keras, TensorFlow, NumPy, scikit-learn, OpenCV, AWS Cognito, Glue, Athena, S3, RDS, DMS, Lambda, API Gateway, GCP, Firebase, Power BI, DAX, Auth0, Tailwind, Radix UI, Material UI, Sketch, Postgres, MySQL, MongoDB, MSSQL, SSRS, Terraform, GitHub Actions, GitLab, Travis CI, Jest, k6, PHPUnit, PHPSpec, phpDocumentor, CodeCov, Jira, Docusaurus

Work Experience

Staff Software Engineer SalesRiver (InsurTech), Lexington, KY – Remote

Aug 2021 – Present

- Senior SWE (Aug 2021) → Lead SWE (Jan 2023) → Acting CTO (Jul 2023) → Staff SWE (Oct 2023)
- Assumed all CTO duties when CTO took an extended leave (July 2023 – Oct 2023)
- Led a team of six engineers from Seed through [Series A](#) (\$4MM raised, \$15MM Valuation)
- Took full ownership of our backend, process, tooling, code quality, code reviews, deployments, unit testing, load testing, site reliability, documentation, and training for our entire product
- Architect and primary contributor on a project that drastically streamlined deployments by merging 10 duplicate single-tenant applications into a single multi-tenant application, including merging data from 10 Postgres databases (with some very complex data transformations), 10 Node.js APIs, and 10 React apps, all within 1 hour of scheduled downtime
- Re-architected our backend infrastructure and built a new deployment pipeline, enabling us to transform our single instance web app into a multi-tenant enterprise SaaS app, resulting in **\$800K+ new Annual Recurring Revenue** and a new parent company ([SalesRiver](#))
- Mentored engineers on data structures, algorithms, design patterns, security, and best practices
- Collaborated with Design team to plan new features, ensuring that UI/UX could be developed as efficiently as possible

Senior Software Engineer NCCER (Construction Education Non-Profit), Alachua, FL – Remote

Oct 2019 – Aug 2021

- Built the entire backend of a new [Single Sign-On Service](#) and took full ownership of the project, including architecture, infrastructure, testing, deployment, migration, monitoring, maintenance, training, and coordinating with third-party software developers

- Completely overhauled an antiquated database and reporting system, including a database cloud migration (MSSQL => RDS Aurora Postgres), new ETL pipeline, drastically improved data schema, new GraphQL API, new CRUD web app, and dozens of reports
- Developed real-time reports and conducted ad-hoc statistical analyses to produce actionable insights for executive leadership

Software Engineer & Graduate Research Assistant *University of Colorado, Boulder, CO – Hybrid*

Aug 2016 – May 2020

- Developed [an Artificial Neural Network](#) (ANN) and web app for the Colorado DOT, providing substantially more accurate and consistent estimates of construction durations than CDOT's existing methods, app is now used for all new projects throughout the state
- Developed [a web app](#) that applied the decision-making Delphi Method **50x faster** than traditional implementations, results published in a CII-funded research study ([Research Team DCC-01](#))
- Developed [an open-source web app](#) for **animating and analyzing eye tracking data** to study how construction craft workers read construction drawings, results published in 7 peer-reviewed papers

Civil Engineer *Dyer & Associates, Part-Time, Richmond, KY – Remote*

May 2014 – Nov 2018

- Full site design for new manufacturing facilities (\$20MM – \$120MM projects), including: site and utility layout, grading and erosion control plans, stormwater systems, retaining walls, minor roads and rails

Founder & Solo Software Engineer *Dirtplan.com*

Feb 2013 – Jun 2016

- Developed a web application to slash construction engineering review times from 2 months to 2 weeks
- Expanded the app into a fully featured social network for construction professionals
- **App acquired for \$300K**

Construction Project Manager *3D Enterprises, Lexington, KY*

Jan 2011 – May 2014

- Technical oversight of the construction of municipal water treatment plants, total budget of \$126MM

Education

PhD, Civil Engineering <i>University of Colorado, Boulder, CO</i>	(3.9 GPA) 2016 – 2020
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BS, Civil Engineering <i>University of Kentucky, Lexington, KY</i>	(3.9 GPA) 2014 – 2016
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BS, Construction Management <i>Eastern Kentucky University, Richmond, KY</i>	(3.8 GPA) 2008 – 2012
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Certifications

- AWS Certified Developer – Associate, Jul 2019
- Engineer in Training (EIT), Kentucky Board of Engineers and Land Surveyors, Mar 2016

Publications – more work available on [ResearchGate](#)

- “Advanced Eye Tracking Analysis for Investigating Construction Craft Professional Interactions with 2D Drawings.” *University of Colorado (Doctoral Thesis)*, Aug 2020, [Link](#)
- “How to Double Productivity.” *Construction Industry Institute*, June 2019, [Link](#)
- “Visualizing Eye Tracking Convex Hull Areas: A Pilot Study for Understanding How Craft Workers Interpret 2D Construction Drawings.” *ASCE Construction Research Congress 2018*, Apr 2018, [Link 1](#), [Link 2](#)
- “The Impact of Engineering Information Formats on Craft Worker Eye Gaze Patterns.” *Computing in Civil Engineering 2017*, Jun 2017, [Link](#)