

Dr. Matt Sears

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Full Stack Engineer | Data Scientist | AWS Certified Developer – Associate

I'm a full stack software engineer and university-trained data scientist with a ❤️ for Clean Code, DevOps, GitOps, and Developer Experience. I have over 10 years of experience developing software and I've published six peer-reviewed papers. I also have an extensive background in the construction industry.

Recent Work – See more on my personal site

Senior Software Engineer *Leadrilla, Lexington, KY (Remote)*

Aug 2021 – Present

- Introduced and implemented DevOps: Infrastructure as Code, unit, integration, and load testing, containerization, automated rolling deployments, monitoring, reporting dashboards.
- Developed new features from designs (e.g., [new marketplace](#)), including tech specs, schema design, serverless and traditional backend services, frontend components and state management.

Senior Manager, Business Analytics and Research

National Center for Construction Education and Research (Remote)

Oct 2019 – Aug 2021

- Designed, deployed, migrated, monitored, and maintained the entire backend of a new [Single Sign-On service](#).
- Completely overhauled an antiquated database and reporting system, including a database cloud migration (MSSQL => RDS Aurora Postgres), ETL pipeline, drastically improved data schema, new GraphQL API, new CRUD web app, and dozens of Power BI reports. Resulted in significant cost savings and provided staff and customers with insights that had never previously been possible.

Graduate Research Assistant (PhD Student)

University of Colorado, Boulder, CO (Primarily Remote)

Aug 2016 – May 2020

- Developed [an Artificial Neural Network](#) (ANN) and web app for the Colorado DOT that predicted the number of days required to construct highway projects, providing substantially more accurate and consistent estimates than CDOT's existing methods
- 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 analyzing and animating eye tracking data to study how construction craft workers read construction drawings, results published in several papers

Civil Engineer *Dyer & Associates, Richmond, KY (Remote)*

May 2014 – Nov 2018

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

Jan 2011 – May 2014

Education

PhD, Civil Engineering

University of Colorado

2016 – 2020 (3.9 GPA)

BS, Civil Engineering

University of Kentucky

2014 – 2016 (3.9 GPA)

BS, Construction Management

Eastern Kentucky University

2008 – 2012 (3.8 GPA)

Research Expertise

Construction Productivity, Eye Tracking, Deep Learning

Software Skills

Languages & Frameworks

JavaScript, TypeScript, Node.js, Next.js, Express.js, Meteor.js, Electron.js, Gatsby.js, SQL, PHP, Laravel, Dart, Flutter, Python, R

DevOps & GitOps

Git, Terraform, GitHub Actions, Docker, ECS, Jest, Mocha, k6, CloudFormation, CloudWatch, Amplify, Webpack, Babel, Jira

Backend & Data Engineering

AWS Lambda, RDS, EC2, API Gateway, Glue, DMS, Athena, DynamoDB, PostgreSQL, GraphQL, Hasura, MongoDB, MSSQL, Keras, DAX, TensorFlow

Front-End & Design

React.js, Material UI, Figma, Sketch, Bootstrap, Power BI