

Matt Sears, PhD

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Data Scientist | Full Stack Developer | AWS Certified Developer - Associate

I have 10 years of experience developing software and I'm passionate about building high-quality, data-driven solutions. I've published four peer-reviewed papers, I'm a former civil engineer, construction project manager, and I've spent the last 5 years building software to conduct construction productivity research.



Work History

Senior Manager, Business Analytics and Research

National Center for Construction Education and Research (Remote)

Oct 2019 – Present

- Completely overhauled an antiquated database and reporting system, including a cloud migration, ETL pipeline, significantly improved data schema, new GraphQL API, new CRUD web app, and a collection of Power BI reports. Resulted in significant cost savings and provided staff and customers with insights that had never previously been available.

Graduate Research Assistant

University of Colorado Boulder, Boulder, CO

Aug 2016 – May 2020

- Developed an open-source web app for analyzing and animating eye tracking data to study how craft workers read construction drawings (blueprints), published several papers with the results
- Developed a web app that applied the decision-making Delphi Method in 2% of the time traditionally required, results published in a funded research study
- Developed an ANN for the Colorado DOT that predicted the number of days required to construct highway projects, CDOT and other state DOT's requested that we expand the model after it provided considerably more accurate and consistent estimates than their existing methods
- Developed and delivered several guest lectures

Civil Designer / Engineer in Training (EIT)

Dyer & Associates, Richmond, KY (Remote)

May 2014 – Nov 2018

- Used AutoCAD Civil 3D to draw 3D models and produce plans (blueprints) and calculations for stormwater drainage systems, grading, parking lots, roads, rails, utilities, etc. for new manufacturing facilities and apartment complexes.

Construction Project Manager

3D Enterprises, Lexington, KY

Jan 2012 – May 2014

- Technical review and oversight of the construction of municipal water and wastewater treatment plants.



Education

PhD, Civil Engineering

University of Colorado

Aug 2016 – May 2020

BS, Civil Engineering

University of Kentucky

July 2014 – May 2016

BS, Construction Management

Eastern Kentucky University

Aug 2008 – May 2012



Skills

JavaScript / Node

Excellent

Power BI & DAX

Excellent

Eye Tracking

Excellent

CAD

Excellent

AWS & Terraform

Very Good

SQL

Very Good

Python & ML / AI

Good

PHP

Good

R

Average