SASHA BAJZEK

3 BAYSIDE VILLAGE PLACE, UNIT 407
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(708) 205-6354 cell

OVERVIEW

Ms. Bajzek is a structural engineer excited to break into the world of front end web development. Her passion for making things and solving logic puzzles is what drove her be an engineer and from taking classes and working on projects, she has found that front end web development provides much more opportunities for creativity and learning than traditional structural design. Her experience includes five years of working on teams solving complex engineering problems and developing efficient engineering designs for various transportation clients. She is ready to transfer this experience to creating front end web solutions.

EDUCATION

M.S. in Civil Engineering: Structural Engineering
Virginia Polytechnic Institute & State University, Blacksburg, VA — *Graduation: May 2013* — *GPA: 3.81 / 4.00*

B.S. in Civil Engineering: Structural Engineering
Illinois Institute of Technology, Chicago, IL — *Graduation: May 2011* — *GPA: 4.00 / 4.00*

Jeffrey Faden's Front End Web Development Class — *February 2016 – December 2016*

CodeSchool Classes — *June 2015 - Present*

FRONT END WEB DEVELOPMENT PROJECTS

Haiku For You I: a MEAN stack app for poetry enthusiasts

- This web app uses Angular 1 to display haikus from a MongoDB database and creates a randomized slide show for the user's enjoyment. Users can add their own haikus to the collection with a modal that utilizes angular form validation. An admin page with oAuth verification has the ability to delete any unwanted haikus. GitHub Link: https://github.com/SashaBajzek/haikuMEAN

Haiku For You II: a reboot of the MEAN stack version using React-Redux and Ruby on Rails

- This web app takes the functionality of the front-end MEAN stack app and refactors it into React-Redux to take advantage of the virtual DOM and modularity that React provides. Redux is used to manage the state with Immutable.JS to ensure pure functions that cut back on side effects. A Rails 5 API is used on the backend. GitHub Link: https://github.com/SashaBajzek/redux-haikumvc

Beach Twitter: a beach themed Twitter front end using React-Redux

- This responsive web app combines React-Redux with beach themed SVGs to create a unique Twitter experience. To enhance the efficiency and minimize the number of times components were re-rendered, reselect and normalizr were used. GitHub Link: https://github.com/SashaBajzek/NoiseTwitter-React-Redux

Spectrum Technology Group: a professional website using React

- This responsive website is a professional landing site for potential clients showcasing Spectrum Technology Group. It utilizes React, SASS, and create-react-app. GitHub Link: https://github.com/SashaBajzek/spectrum

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WORK EXPERIENCE

Structural Engineer, EIT *Parsons Corporation, San Francisco, CA* *(March 2014-Present)*

Southwest Calgary Ring Road, Calgary, Canada

- Ms. Bajzek is currently working on Bridge 9 of this project which is a 29m single span, integral abutment, concrete box girder bridge. Ms. Bajzek designed the 900mm concrete box girders, approach slabs, wingwalls, and deck. She also worked closely with the substructure team checking their CSIBridge model of the structure and the designs of the integral abutment and steel H piles.

California High Speed Rail CP1, California, USA

- Ms. Bajzek worked on this $1 billion design-build project that includes the first section of an ultimate 800-mile-long, new high-speed rail system that will accommodate trains running between San Diego and Sacramento at speeds of more than 200 miles per hour. Ms. Bajzek designed the substructure columns and shafts for the Fresno River Viaduct utilizing SpColumn, XTRACT, and Lpile. She also designed the superstructure for the simply supported spans of the San Joaquin River Viaduct using RM Bridge to design the 11-foot tall box girders.

Structural Engineer, EIT *exp, Chicago, IL* *(March 2013-March 2014)*

IL-104 River Bridge over the Illinois River, Meredosia, IL, USA

- This project includes the replacement of the existing five-span IL-104 Bridge over the Illinois River with a new ten-span steel bridge that will be 2127.2-feet long and 47.2 feet wide. Ms. Bajzek designed the steel plate girders, steel details, joints, and bearings for the nine 140 to 200 foot long approach spans.

IL-104 Bridge over McGee Creek Ditch, Meredosia, IL, USA

- The existing IL-104 bridge over McGee Creek will be widened and slightly realigned with the existing pier and abutments being modified and widened to match the new superstructure of the 135-foot long, two span steel beam bridge. Ms. Bajzek created the staged design of the deck, approach slabs, abutments, steel details, bearings, and pier.

Graduate Research Assistant *Virginia Tech, Blacksburg, VA* *(December 2011-February 2013)*

- Ms. Bajzek worked on the Tide Mill Bridge test program that included the construction, testing, and analysis of a 44'-0" long, skewed, simply-supported Hybrid Composite Beam (HCB) bridge. The Virginia Department of Transportation (VDOT) financed the replacement of the Tide Mill Bridge with the first of its kind in Virginia to incorporate the HCB, and created a test program to investigate the behavior of the HCB bridge system and to develop design procedures for the Tide Mill Bridge. Ms. Bajzek's work focused on the behavior of the deck, and she developed Abaqus models used to predict the bridge deck behavior and optimize its design.

COMPUTER COMPETENCIES

- Front-End Web Development: JavaScript, HTML, CSS, Sass, Angular, React, Redux, Express, Node, MongoDB, Bootstrap, JQuery, Git, Ruby on Rails, Immutable, Redux-Forms, Reselect, Normalizr
- Structural Software: MicroStation, LARSA, CSIBridge, RM Bridge, SPColumn, XTRACT, LPile, Conspan, Abaqus

PUBLICATIONS

Transverse Deck Reinforcement for Use in Tide Mill Bridge Virginia Tech Masters Thesis *Spring 2013*