



Field Session 2019
Colorado School of Mines

Company Overview

Woot Math is an Educational Technology startup located in downtown Boulder, Colorado. We are passionate about both education and software, and we are focused on developing new technology to help teachers help students. For the students that join our team, we offer an opportunity to not only build world-class software, but also the chance to have a real impact in an important context as well as the opportunity to work with a very talented and experienced engineering team in a fun, high-energy environment.

Project: Content Uploader and Digitizer

Help us augment Woot Math's award winning and market leading platform by building an application to help teachers upload and digitize content from existing paper content (imagine uploading a math worksheet). The system will capture and analyze the image as a bitmap. The analysis will include segmenting the page into tasks, and trying to extract and represent key quantities from the task using offline optical character recognition. The machine-processed content will be presented back to the teacher for proofing and editing; i.e. you will create a human-in-the-loop Machine Learning interface designed to help speed the process of digital content creation. The team that chooses this project will gain experience in building UI, client-side analysis implemented in javascript or typescript, offline analysis for OCR using 3rd party ML libraries and server side plumbing for capturing the input and edits from the teacher.

Key Technologies

There are a number of emerging technologies that will be leveraged for this effort.

- Develop mobile web technology for interactive content that can be delivered in a device/platform agnostic way.
- Express framework and Node.js for web services.
- GraphQL based application server endpoints.
- NoSQL web-scale data and storage, MongoDB, Redis
- Cloud hosted, containerized (Docker) production application workflows.

Location

Flexible. The team will be expected to travel to Boulder for meetings and mentorship. Working independently or as a team in the Golden area will be acceptable. Students will be required to provide their own computer.