# Tyler Coleman

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## Education

**Tufts University** – Medford, Massachusetts
BS Electrical Engineering '17, cum laude

Coursework:
web development - data structures - digital signal processing
communications systems - linear systems – feedback control systems
computational physics - microprocessor architecture - probabilistic systems analysis

## Experience

**Pacific Gas & Electric** (contracted) – San Francisco, CA
Software Engineer – *September 2017 - present*
- Developed IT web applications with Java, utilizing technologies such as servlets, JSP, and JDBC.
- Used tools like VB and Selenium to automate existing test procedures utilized by remote teams.

**Autoliv Active Safety** – Lowell, MA
Technical Intern – *Summer 2016*
- Contributed to bring-up of narrow-band radar sensor prototype for automotive use.
- Conducted critical review of hardware design to identify potential weaknesses.

## Projects

**Burger Builder** – React.js – burger-builder-b1bbd.firebaseapp.com
- A simple React app that allows users to build and "order" burgers with an interactive interface.
- Integrates concepts such as form validation, routing, and responsive design.

**Rate My Lunch** – React.js, Redux – rate-my-lunch.firebaseapp.com
- Developed a faux social media where users can post and vote on other users' lunches.
- Integrated React front-end with RESTful back-end to enable data persistence using Firebase.

**Web Game Development** – Express, Phaser, Socket.io
- Built UI and REST API for a real-time, multiplayer TRON clone, including a matchmaking system.
- Enabled data persistence and stat-tracking by integrating a NoSQL database and a login system.

**Automated Cough Counting System** – PIC24, embedded C
- Designed a wearable device in conjunction with the Hospital Nacional Dos de Mayo in Peru.
- Analyzed microphone and accelerometer inputs in real time to profile cough samples.

**Fractal Generation** – C++
- Implemented escape-time algorithm for Mandelbrot set to generate bitmap images with controllable histogram coloring and zooming.

## Skills

- Object-oriented analysis, design, and development
- Front-end and back-end web development
- Design and execution of software test plans
- Technical and non-technical communications

Languages: C++ (advanced), C (proficient), Java (prof.), Visual Basic (prof.), MATLAB (prof.), JavaScript (prof.), C# (prior exp.), Python (prior exp.), SQL (prior exp.)
Tools: React.js, Redux, Node.js, jQuery, Unity, Selenium