

# Brandon J. Chen

brandonjianchen@gmail.com / portfolio: [raisinbran.github.io/design](https://raisinbran.github.io/design)

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## EDUCATION

**Northwestern University**, BS Design and Manufacturing Engineering / 2013-2017

Relevant courses: Energy Sustainability, Human-Centered Product Design, Intellectual Property & Innovation, Interdisciplinary Design Projects, Operations Research

## WORK EXPERIENCE

**Project Engineer** / December 2018-Present

Rail Surveyors and Engineers, Inc., Belmont, CA

- > Assist senior engineers with project planning and research, data processing and mapping, report preparation, engineering drawing production, and field support; delegate tasks to other engineers as needed
- > Projects include: Caltrain Positive Train Control, Santa Clara VTA light rail signal & component assessment "SCADA", Metrolink rail asset management system "RAMS", Metrolink Redlands rail extension

**Design Engineer Intern** / June-September 2016

Filtran (Filtration Group), Des Plaines, IL

- > Decreased development time of new products by 18%, and improved concepts using computer-modeled tests
- > Reduced machining and setup time of fixtures for performance qualification tests and vibration tests by 60%
- > ISO-9000, ISO-14001, TS-16949 certified

**Project Design Intern** / June-September 2015

Segal Design Institute, Evanston, IL

- > Co-lead of floor outlet cover replacement: Removed tripping hazards; managed sourcing and prototyping
- > Machinist and electronic assembler for infant warming pad, presented at University of Ibadan medical conference

**Ad Production Artist** / September 2013-June 2017

*The Daily Northwestern*, Evanston, IL

- > Set up the newspaper ad layout and formatted media on a daily deadline, often filling in for supervisor
- > Revised reference manual to speed up training and eliminate dependence on in-office expertise

## DESIGN PROJECTS

**Manufacturing Engineering Capstone** / March-June 2017

Optimize wrench assembly process in a factory environment

- > Designed riveter fixtures, conducted root cause analyses, and optimized batch process time from 1 unit per 10 minutes to 7 units per 30 minutes

**"Bolt" Breadfruit Peeler Design Capstone** / January-July 2016

Motorized peeler that improves breadfruit-to-flour processing for Haitian and Jamaican farmers

- > Increased per-person throughput to 500+ per shift, reduced training time, and improved peeling safety

## SKILLS

**Product Design:** Human-computer interaction, industrial design, life-cycle analysis, mechanical engineering, project management, UX research, web design; C++, CSS, HTML, JS

**Computer-Aided Design:** AutoCAD, Civil 3D, MicroStation; Creo Pro/E, Siemens NX, SolidWorks, Sketchup

**Software:** Adobe Illustrator, InDesign, Photoshop, CorelDraw; ArcGIS, Microsoft Office, Minitab

**Machine Shop:** 3D printing, injection molding, milling, casting, sheet metal working

**Manufacturing & Statistics:** Design of experiments, GD&T, lean manufacturing, materials selection

**Writing:** Creative writing, journey mapping, technical writing