

## Brandon J. Chen

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## EDUCATION

**Northwestern University**, B.S. Design and Manufacturing Engineering / 2013-2017

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

**Activities:** 3D4E (3D Printing for Everyone) club co-founder / 2016-2017

## WORK EXPERIENCE

**Design Engineer** / 2018-Present

RSE, Inc. / Belmont, CA

- **Caltrain, Positive Train Control** (collision prevention system): Represented client as a witness and test engineer during contractor field equipment verification
- **Caltrain, signal system maintenance:** Updated signal diagram drawings systemwide; Worked with client in conjunction with upcoming diesel-to-electric train conversion, positive train control, and other track construction projects; Assigned tasks to other engineers as needed
- **Los Angeles Metro, West Santa Ana Branch Extension:** Processed field survey data from 40 crossings into preliminary computer models for track design phase; Coordinated with senior engineer and co-contractors on workflow and deliverables
- **Santa Clara Valley Transportation Agency, light rail system:** Designed and managed team drawings and reports for a study on future signal and network system upgrades
- Researched more efficient engineering drawing methods e.g. automated pagination, batch cleanup scripts

**Design Engineer Intern** / 2016

Filtran LLC (Filtration Group) / Des Plaines, IL

- Designed conceptual transmission fluid filters for major auto manufacturing clients, including an exclusivity contract with Ford Motor Company for their entire car lineup
- Redesigned mounting equipment and shortened product performance qualification & vibration tests

**Design Intern** / 2015

Segal Design Institute / Evanston, IL

- Co-led floor outlet cover replacement: Removed tripping hazards; managed sourcing and prototyping
- Collaborated on design and building of infant surgical warming pad with the University of Ibadan

**Ad Production Artist** / 2013-2017

*The Daily Northwestern* / Evanston, IL

- Set up the newspaper ad layout and formatted media on a daily deadline
- Managed workflow and delegation of tasks to junior artists when supervisor was unavailable
- Independently revised ad production reference manual to retain collective skills between academic years

## DESIGN PROJECTS

**“Bolt” Breadfruit Peeler Design Capstone** / 2016

Designed motorized peeler that reduced breadfruit-to-flour processing time and labor for Jamaican farmers; Increased per-person throughput to 500+ per shift, reduced training time, and improved user safety

**Manufacturing Engineering Capstone** / 2017

Optimized a product assembly with engineering team, designed fixtures, and conducted root cause analyses

## SKILLS

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

**Computer-Aided Design:** AutoCAD, Civil3D, MicroStation; Creo Pro/E, Siemens NX, SolidWorks, Sketchup

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

**Product Design:** Human-computer interaction, industrial design, life-cycle analysis, mechanical design, project management, UX research; technical writing, product journey mapping

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