

Brandon J. Chen

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EDUCATION

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

Courses of Interest: 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

PROFESSIONAL EXPERIENCE

Design Engineer / 2018-Present

RSE, Inc. / Belmont, CA

- **Caltrain, signal system maintenance:** Updated signal diagram drawings systemwide; Worked with client in conjunction with upcoming track electrification, positive train control, and other track construction projects; Trained other engineers and delegated work as needed
- **Santa Clara Valley Transportation Authority, light rail system rehabilitation:** Processed survey point clouds; Created topography for rehabilitation candidate locations
- **BART, PreScience track geometry car development:** Created alignments for PreScience based on agency's original as-built drawings
- **Caltrain, Grade Crossing Hazard Analysis:** Analyzed on-ground conditions at all grade crossings, calculated potential risks of anticipated incidents, and proposed curated safety improvements; Managed intern work
- **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 project manager and contractors on the schedule, standards, and deliverables
- **Caltrain, Positive Train Control** (collision prevention system): Represented client as project witness and field/test engineer during contractor field equipment verification
- Noted expert in RSE for MicroStation and survey data processing; Trained colleagues as needed

Design Engineer Intern / 2016

Filtran LLC (Filtration Group) / Des Plaines, IL

- Designed conceptual transmission fluid filters for major auto manufacturing clients, including Ford Motor Company via an exclusivity contract for all their vehicles
- Redesigned lab 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

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

SKILLS

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

Survey: Leica Cyclone, ReCap, TopoDOT

Transportation: Track design, signal design, survey data processing, agency CADD standards

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

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

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