

Brandon J. Chen

branjchen@gmail.com / portfolio: raisinbran.github.io/design

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

Project Engineer / 2022-Present

Lea+Elliott, Inc.

Assist AGT/APM system planning initiatives, including design, cost estimating and technical reports

- Singapore Changi Airport T2C and T5 expansions
- SeaTac Airport long-term transit planning
- Salt Lake City Airport APM extension

Design Engineer / 2018-2022

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
- **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 interns
- **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
- **BART, PreScience track geometry car development**
- **Caltrain, Positive Train Control** (collision prevention system): Project witness and field/test engineer

Design Engineer Intern / 2016

Filtran LLC (Filtration Group) / Des Plaines, IL

Designed transmission fluid filters for major automotive manufacturers; Overhauled QA equipment designs

Design Intern / 2015

Segal Design Institute / Evanston, IL

Co-led Segal floor outlet cover replacement; Designed and built prototype infant surgical warming pad

DESIGN PROJECTS

"Bolt" Breadfruit Peeler Design Capstone / 2016

Designed motorized peeler that reduced breadfruit-to-flour processing time and labor for Jamaican farmers

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

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