



Brandon J. Chen

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I am looking for a position that offers engineering and design challenges with no straightforward solution. With experience in human-centered design and CAD, and with a strong aesthetic sense, I can immediately step into a high-contribution position. Most of all, I enjoy the satisfaction of understanding and fulfilling user and client needs.

EDUCATION

Northwestern University
B.S. Manufacturing and
Design Engineering / 2017

SKILLS

AutoCAD, PTC Creo, Siemens
NX (CAM and CAD),
SketchUp, SolidWorks and
Photoview 360

Other software such as:
Adobe InDesign,
Photoshop, ArcGIS, CES
EduPack, Microsoft Office,
Minitab

Basic shop machinery (3D
printer, CNC, laser cutter,
lathe, mill, etc.)

Manufacturing processes esp.
plastics & metals, material
selection

Drawing/sketching

Technical writing, creative
writing, journey mapping

HTML, CSS, Javascript

Relevant coursework:

Human-Comp. Interaction,
Intro Electronics Design,
Industrial Design,
IP & Innovation,
Production Planning,
Visual Storytelling

OTHER EXPERIENCE

Ad Production Artist

Students Publishing Co. (Daily
Northwestern, Yearbook)
Fall 2013 – Spring 2017

Treasurer

3D4E (3D Printing for
Everyone)
Spring 2016 – 2017

WORK EXPERIENCE

Design Engineer Intern

Filtran (Filtration Group), Des Plaines, IL / Summer 2016

Leading supplier of transmission fluid filters to automotive industry; ISO-9000,
ISO-14001, TS-16949 certified

Transformed client needs, inc. Allison, Ford, Jatco, Mazda, into brand-new
CAD models, adherent to manufacturing CD&T

Resolved issues with fluid flow, structural integrity, and manufacturing in
proposed products, based on analyzing CFD and FEA testing reports

Designed PQ and vibration adapters, corresponded with machinists on the
floor, and ran simple lab tests

Summer Intern

Segal Design Institute, Northwestern University / Summer 2015

Floor Outlet Covers: replacement of old covers at the Segal building, which were
worn out, unsightly, and hazardous to passersby

Co-lead; coordinated material logistics and milestones; designed and
machined multiple wood, steel plate, and ABS models

Infant Warming Pad: low-cost warming pad for Nigerian infants undergoing
gastrointestinal surgery

Built housings and cooling system for power supply and LCD

Inset wires into interior frame, soldered resistor pads and thermometer chips,
among other electronics assembly

North Garage Space for car teams: newly built space with potential identified by
the engineering school marketing team

Translated current space into CAD drafts to assist the team

SCHOOL PROJECTS

Team Member, Manufacturing Engineering of Bionic Wrench™

Spring 2017

Analyzed and assembled Loggerhead Tools' wrench using a factory-line-like
process and machines, inc. worker efficiency, assembly accuracy, machine
capacity (riveters, heat guns)

Designed (Siemens NX) & machined metal assembly fixtures

Made measurements on optical CMM

Rehearsed endless test runs to redo and refine our procedures

Team Member, "BoltPeeler" Breadfruit Peeler

Winter – Summer 2016

Accelerate breadfruit-to-flour conversion in Haiti and Jamaica, to strengthen
food security and to increase the success of commercial ventures by local
farmers

Primary designer, including managing CAD versions, producing presentation
media, and selecting build materials

The final prototype replaces the traditional knife-peeling with a motor-driven
blade and mechanical clamps adjustable to any size of fruit, breadfruit
nonexclusive; throughput is significantly raised, and training time and injury
potential are lowered