

# Jonathan Liu

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## EDUCATION

*Northwestern University*

**Robert R. McCormick School of Engineering and Applied Science**

Computer Science Major, Northwestern National Merit Scholar

GPA: 3.63/4.00

**Relevant Courses:** Machine Learning, Intro to AI, Design and Analysis of Algorithms, Programming Languages, Data Structures & Algorithms, Intro to Computer Systems, Human Computer Interaction

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## TECHNICAL SKILLS

**Software:** Git, Linux, Google Cloud Platform (GCP), Google Firebase, NodeJS, NextJS, Express, Sequelize, PostgreSQL

**Languages:** Python, JavaScript, HTML, CSS, React, React Native, C, C++, C#, LaTeX, MATLAB

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## WORK EXPERIENCE

*PeerPal*

Research Assistant

*Evanston, IL*

Sep 2020 – Present

- Full stack contributor in a team of three developers supervised by Northwestern faculty
- Developing student peer-grading tool used with any learning system partnered with the IMS Global Consortium
- Coordinate weekly team and faculty stand-up meetings to review progress and set goals to maximize productivity

*Caravan Carpool*

Software Engineer

*Denver, CO*

Jul 2020 – Sep 2020

- Launched Expo React Native iOS carpool app for skiers in Denver with a team of six engineers
- Led pair programming sprints and implementation of multiple Expo APIs in full stack agile development
- Streamlined database structure in Firebase Realtime Database and led refactorization to remove redundancy
- Wrote automated database maintenance script that runs twice a week using a cron job with Google Cloud Scheduler

*Northwestern IT Support Center*

Senior Consultant

*Evanston, IL*

Oct 2018 – Jun 2020

- Assessed NUIT-supported software and service issues for the Northwestern student and faculty body
- Identified phishing and other more complex issues to escalate users to the appropriate departments and groups
- Communicated with users promptly and professionally providing over-the-phone, email, and walk-in assistance
- Logged concise, in-depth documentation for 500+ cases for future reference

*Dassault Systèmes*

Intern - Developer

*Waltham, MA*

Jul 2019 – Sep 2019

- Independently developed SolidWorks Slicer add-in using the SolidWorks COM API that takes cross sections of a part and generates cuttable slices that can be assembled into a standing item
  - Formulated algorithms for backend calculations and slice generation with extensive implementation of matrices
  - Specialized in SolidWorks and FabLab machines such as laser cutters and vinyl cutters to manufacture slices
  - Created end-of-project demonstration video for upper management to persuade an eventual future release
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## COURSE PROJECTS

*Northwestern University, Design/Thinking/Communication Course*

Lead Product Designer

*Evanston, IL*

Spring 2019

- Designed and constructed an agility A-Ramp transportation and storage device for canine training facility  
*Unleashed in Evanston* that enables one-person operation of the A-ramp
- Consulted with client to assess specific needs and performed industry research to formulate design requirements
- Measured benchmarking metrics from user trials and performance testing to identify areas of improvement
- Improved design iteratively through multiple rounds of testing and incorporating client and professional feedback