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# Nicolas Hite

## SKILLS

### Languages

*Expert*
Python
Dart
Java

*Proficient*
C#
C++
JavaScript / Node JS
TypeScript

### Application
Flutter
Angular / AngularDart
Guice
Protobuf
gRPC

### Infrastructure
Bazel
GCS
Kubernetes
Linux

### Robotics
Bionics / Prosthetic Design
Mechatronics
3D Printing
Machine Learning
Computer Vision
ROS
CAD / FEA

## HONORS

**Google ACX Citizenship Award**
Won three times for infrastructure support

**JSC Director's Innovation Team Award**
Presented to Avionic System's Flight Deck of the Future team for outstanding innovation

**Senior Design Project Highest Honors**
Awarded for MIT thesis

Designs from Media Lab featured on CNN and multiple TED talks

## EDUCATION

**Harvard University | Cambridge, MA**
*B.S. Engineering Sciences*                    *September 2010 - May 2014*
Track in Biomedical and Mechanical Engineering - GPA: 3.4 / 4.0
Thesis: Augmentation of Muscular Endurance in Lower-Limb Exercises via Passive Elastic Exoskeleton

## WORK EXPERIENCE

**X, The Moonshot Factory | Mountain View, CA**
*Wearable Robotics Software Engineer*            *Feb 2021 - Present*
Building a robotic exoskeleton to improve quality of life for hundreds of millions of people

**Google | Mountain View, CA**
*Senior Software Engineer, Google Ads*            *May 2017 - Feb 2021*
Authored cross-platform Dart RPC library used by 75+ major apps within Alphabet, including Google Play Console, Waymo, and Google Ads
Maintained the open-source Dart protobuf compiler and gRPC libraries
Led cross-team working group to optimize query latency for migration of $100+ billion / year product (Search Ads 360)
Stood up offline pipeline for UI customization to reduce page load latency
Re-tooled entity metadata delivery infrastructure for complex UI scenarios

**McMaster-Carr Supply Company | Chicago, IL**
*Software Engineer, mcmaster.com*            *August 2014 - May 2017*
Rewrote the Order History page to reduce median page load latency by 300ms
Authored warehouse automation routines on z/OS mainframe in COBOL
Designed and implemented Virtual Desktop Infrastructure solution to support ~1,000 call center employees

**NASA Johnson Space Center | Houston, TX**
*Avionic Systems Engineering Intern*            *May 2013 - August 2013*
Designed visualization system for "Holodeck" telepresence dome
Used CAD and FEA to build and analyze projector support systems
Wrote C++ with OpenGL to create warp matrices for projector image correction

**MIT Media Lab Biomechatronics Group | Cambridge, MA**
*Prosthetics Undergraduate Researcher*            *June 2012 - May 2013*
Designed new 3D-printed leg socket and improved Factor of Safety 5x via FEA
Created new socket design method in SolidWorks to speed up design 10x

*Thesis*                    *August 2013 - April 2014*
Designed, built, and tested lightweight human-powered exoskeletons
Used MATLAB CV library to track motion and calculate 2D stiffness of springs
New design reduced metabolic expenditure by ~15% for squat activities