

CONTACT



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EDUCATION

Tufts University (Medford, MA)

GPA: 3.76 *Dean's List*
Graduation Date: May 2021

Jesuit High School (Portland, OR)

GPA: 4.26 weighted, 3.96 unweighted
Graduation Date: June 2017

RELEVANT COURSES

- Data Structures
- Machine Struct. & Assembly Lang.
- Algorithms
- Human Computer Interaction
- Nanobiotechnology
- Biomechatronics
- TA: Computing in Engineering
- TA: Engineering Design Lab

TECHNICAL SKILLS

Coding Languages

- >> Python
- >> C++
- >> C
- >> MATLAB & Simulink
- >> Java

Operating Systems:

Linux, UNIX, Windows

Software Development Tools:

VSCode, Github, Sublime Text, Jupyter Notebooks, Xcode, LaTeX

Technologies & Microprocessors:

Raspberry Pi, Arduino, micro:bit, OpenMV Camera, PyBoard

Prototyping, Design, & Fabrication:

Adobe InDesign, Tinkercad (3D), OnShape (3D), Wordpress, Weebly, Microsoft Office and Excel, LabVIEW, Figma, Marvel, Sketch

IoT Platforms:

Thingworx, Vuforia

SEJAL DUA

Tufts University Class of 2021
Data Science & Biomedical Engineering

EXPERIENCE

Tufts Center for Engineering Education and Outreach

Software Development Intern • Jun 2019 – Aug 2019

- ❖ Developed software which enables bidirectional communication between a LEGO SPIKE Prime hub and various microprocessors.
- ❖ Utilized image processing to implement a smile detection neural network demonstration for LEGO HQ creative executives.
- ❖ Created an Augmented Reality (AR) environment for displaying and updating sensor values using Vuforia and Thingworx.

Oregon Center for Aging & Technology (ORCATECH)

Intern • May 2018 – Aug 2018

- ❖ Facilitated and executed a research validation experiment designed to obtain gait speed data from an elderly cohort of participants with mild cognitive impairment, often in the form of Alzheimer's or dementia.
- ❖ Sifted through 20 years of passive infrared sensing data, investigating the gradual degradation of the circadian rhythm as a result of aging.

Tufts Silklab // Professor Fiorenzo Omenetto

Lab Researcher • Sep 2018 – Present

- ❖ Scaffolded the functionality for a smartphone app that can scan an array of microfluidic sensors on a T-shirt and perform a colorimetric analysis of sweat.

Tufts Student Teacher Outreach Mentorship Program (STOMP)

Executive Board • Sep 2017 – Present

- ❖ Developed and implemented engineering curricula about Natural Disasters, Disability Engineering, Simple Machines, and Robotics for 3rd through 5th grade students.

Molecular MD

Intern • Jun 2015 – Aug 2015

- ❖ Organized and transcribed DNA sequences; mobilized specimen data onto an online platform for company studying genetic mutations in cancer patients.

CLUBS AND CO-CURRICULARS

Tufts Brain Computer Interface (BCI) Team

Member • Sep 2018 – Present

Employing fabrication techniques and programming skills to build an EEG headset which will enable intriguing psychology and cognitive brain science studies proposed by students.

Design Engineering for Social Good

Member • Sep 2017 – Present

Executing a semester long human-centered design project from conception to product, harnessing critical aspects of design thinking such as iteration and prototyping.

Tufts Club Sports

Athlete • Sep 2017 – Present

Committing 12 hours a week to both the women's frisbee and lacrosse teams, participating in practice and tournaments.

Chinese Language Study Group

Member • Sep 2018 – Present

Simulated an authentic language immersion experience by conversing in Mandarin Chinese with a group of peers on a weekly basis.