# **Nelson** Liu

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# **TECHNICAL SKILLS**

#### **PROGRAMMING LANGUAGES**

Java•Python•Javascript•Scheme

#### FRAMEWORKS / STACKS

Flask•LAMP Stack

#### FRONT-END DEVELOPMENT

HTML5•CSS3•Javascript,JQuery•AJAX

**TOOLS / UTILITIES** 

BASH•Git•SVN•GNU EMACS

## EDUCATION

## University of Washington, Seattle

Seattle, WA

Attended from 2015 - 2019 (Projected)

#### TROY HIGH SCHOOL

Fullerton, CA

Attended from 2011 - 2015

## COURSEWORK

#### **TROY HIGH SCHOOL**

#### **Advanced Placement Courses**

Computer Science • English • US History • Physics B • Calculus AB/BC • Economics • Government • Literature

# **ACHIEVEMENTS**

2015 - First Place, Dave Wittry

**Memorial Programming Competition** 

2015 - First Place, California State

**Los Angeles ProgFest** 

2015 - Top 30 of 300+ projects,

PennApps Winter 2015

2014 - Top 20 out of 120+ projects,

HackPrinceton Fall 2014

2014 - Winner, Improving MIT Award,

MIT BitComp 2014

2014 - National Merit Commended

Scholar

2014 - First Place, Science Olympiad **National Tournament • Member of** 

**Troy High Science Olympiad Team** 

2013 - Part One / Part Two Winner,

**IBM Master the Mainframe** 

Competition

2013 - Second Place, Dave Wittry **Memorial Programming Competition** 2013 - Second Place, California State **Los Angeles ProgFest** 

# **EXPERIENCE**

## University of Washington CSE Wireless Lab **Research Assistant**

June 2015 - Present | Seattle, WA

· Working with ambient backscatter to wirelessly power devices and embedded systems.

## MIT CSAIL INFOLAB GROUP

#### **Research Assistant**

June 2013 - September 2014 | Cambridge, MA

- Worked with the START Natural Language Processing System and its backend, Omnibase.
- Wrote Scheme scripts to dynamically extract JPL and U.S. Election Atlas data for use in Omnibase.

## **UCSB BREN KELLER LAB**

#### Research Assistant

June 2014 - July 2014 | Santa Barbara, CA

Developed models to predict and model hydraulic fracture propagation in porous shale formations.

# SOFTWARE PROJECTS

BITSTATION | Winner of MIT Bitcomp Improving MIT Award Summer 2014 | An online Bitcoin wallet for MIT Students

- Features certificate login, address books, and transaction annotation to promote peer-topeer transactions among MIT students.
- Developed with Ruby on Rails in the span of 1 month.

MYODRONE | Top 30 / 300+ projects, PennApps Winter 2015 January 2015 An intuitive method of wearable drone control.

- Team lead role with focus on back-end development.
- Used the Thalmic Labs Myo armband and arm gestures to control a Parrot Drone with 8 degrees of movement.

FALANGAFONE | Top 20/120+ projects, HackPrinceton Fall 2014 November 2014 | An gesture-controlled music editing tool.

- Used the Leap Motion to enable live editing of .mp3 and other sound files via finger and hand gestures.
- Developed a Flask backend as well as a web front-end for the application, used the Pyo library to modify music on the fly.