Andrew Tu

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Education

Northeastern University | Bachelor of Science Computer Engineering/Science | Dean's List 5/2020

- Tech. Coursework: *Embedded Design, Fundamentals of CS, Differential Eq & Linear Algebra, Calc II, Physics II* GPA: *3.88/4.0*
- Involvement: *NU MONET Research, NUCAR Research, IEEE, MIT Ballroom Dance Team, Toastmasters, Lead 360, Society for Asian Scientist and Engineers (SASE) Mentor, Disability Resource Center Note taker*

Skills

Programming Languages *C++, Javascript, HTML, CSS, Java, Visual Basic for Applications*
Technologies *Git, MATLAB, Microsoft Office*
Hardware *XBee Radio Modules, Teledyne Benthos Acoustic Smart Modems*

Technical Experience

MIT Lincoln Laboratories | Co-Op Technical Assistant 1/2017 – Present

- Working with C++ and radar systems

Northeastern University Marine Observatory Network | Undergraduate Research Assistant (NSF REU) 10/2015 – Present

- Designed and implemented smart buoy and GUI control system using C++, QT framework, and XBee Radio modules to bridge above water radio network with subsea acoustic network. Resulted in
  - *Bridging the Internet Between Land and Sea*, poster presentation at CUR 2016 REU Symposium, **First Presenter**
- Implemented MAC protocols in MATLAB on Teledyne Benthos SM-975 Acoustic Smart Modems to advance understanding of modem interactions and compare efficacy of MAC protocols over acoustic channel. Resulted in
  - *Programming Acoustic Modems for Underwater Networking*, published to Embark Undergraduate Engineering Review, **First Author**
  - *Testbed Development and Performance Evaluation of the TARS MAC Protocol for Underwater Acoustic Sensor Networks,* published to MTS/IEEE OCEANS 2016 Conference, Third Author

Northeastern Interactive Clustering Engine | Undergraduate Research Assistant (NSF REU) 6/2016 – 8/2016

- Contributed to open source C++ machine learning library using scalable framework technologies like Git, Cmake, Google Test. Resulted in
  - *Software-Engineered Library Development to Support a High Performance Machine Learning Visualization System*, poster presentation for 2016 Data Driven Discovery (D3) REU Site, (**Best Overall Design**)

NUCAR Side Channel Attacks | Undergraduate Research Assistant 10/2015 – 4/2016

- Developed RSA encryption algorithms in C++ for use in side channel attack on Android application. Presented work:
  - *Hacking your Data – The Hard(ware) Way*, poster presentation at 2016 Research, Innovation and Scholarship Expo (RISE) at Northeastern University

Professional Experience

Bohler Engineering | Warren, NJ Winter Break 2016
Accounting and IT Intern 6/2015 – 8/2015

- Shadowed members of the IT department to learn about daily operations and future projects
- Self-taught VBA to develop macros to expedite processes in Microsoft Excel by up to **300%**
- Improved digital backup process to back-up 4+ months of invoices

Achievements

NU Talk 2017 | Presenting to 300+ people on underwater networking 2/2017
Conrad Spirit of Innovation Design Challenge | Semi-Finalists 4/2015
Boy Scouts of America | Eagle Scout (Bronze Palm) 12/2014

Interests

Ballroom Dancing
Scuba Diving
Ultimate Frisbee
Traveling

Last Updated: 11/23/16