GWENDOLYN CHEE

gchee2@illinois.edu ⋄ (217)· 904· 9057 ⋄ https://github.com/gwenchee

I am an engineer that is passionate about
nuclear technology and developing innovative
systems to face today's energy challenges.

EDUCATION

M.S. **University of Illinois at Urbana-Champaign** 2017 - Present
Nuclear, Plasma and Radiological Engineering

B.A.Sc. **Queen's University at Kingston** 2013 - 2017
Engineering Physics with a specialization in Materials Engineering

RESEARCH EXPERIENCE

University of Illinois at Urbana-Champaign 2017 - Present
Research Assistant, Advanced Reactors and Fuel Cycles *Urbana, IL*

- Conducting research in fuel cycle analysis: specifically using Python and C++ to develop Cyclus, a fuel cycle simulation software
- Processing large data outputted by Cyclus using SQL to analyze various aspects of the fuel cycle
- Development of numerical experiments to test and verify demand driven deployment algorithms in Cyclus

Queen's University at Kingston 2016 - 2017
Research Assistant, Nuclear Materials Research Group *Kingston,ON*

- Designed a Sieverts Apparatus to gaseously charge hydrogen gas into zirconium alloys
- The design is being implemented at Reactor Materials Testing Laboratory to test how hydrogen embrittled zirconium alloys respond in nuclear reactor conditions

National University of Singapore Summer 2016
Research Assistant, Centre for Advanced 2D Materials *Singapore*

- Developed MATLAB programs to study the effect of Berry Curvature on electrons in graphene and the effects of changing the geometry of graphene devices on their electric fields
- Both programs are used to assist graduate students in their design of nano-graphene devices

Nanyang Technological University 2015
Resesearch Assistant, Polymeric Biomaterials Group *Singapore*

- Involved in the biodegradable heart stent project where nanoparticles of varying sizes and composition were added to different kinds of polymers to increase their mechanical properties
- Conducted experiments using Instrom tensile tester, ultrasonicator, microcompunder and thermogravimetric analysis to characterize the nanoparticle enhanced polymer materials

ENGINEERING EXPERIENCE

4th Year Engineering Physics Capstone Project 2016
Self Sorting Recycling Bin *Kingston,ON*

- Developed a neural network to sort between recycling and garbage through image recognition and sound profiling
- Led the mechanical team to prototype the physical design which used feedback from the neural network to physically separate the items

Wirecard AG Summer 2014
Summer Technology Intern *Singapore*

- Redesigned Wirecard's payment processing webpage using HTML and CSS
- The webpage is currently used for redirecting online payments to Wirecard's payment processing service

TEACHING EXPERIENCE

Queen's University at Kingston 2015 - 2017
Teaching Assistant, Physics Department *Kingston,ON*

- Conducted weekly help sessions for students who required extra guidance in the first year physics courses (PHYS 104/106)

SERVICE

U.S. Women in Nuclear 2018 - Present
Committee Member, UIUC Chapter *Urbana, IL*

- Promoting awareness of the benefits of nuclear applications to the UIUC and Champaign-Urbana communities

UC Books to Prisoners 2017 - Present
Volunteer *Urbana, IL*

- UC Books to Prisoners is a non-profit that provides books to Illinois inmates at no cost via mail
- As a volunteer, we read letters from inmates and select books that most closely meets their interests and requests

Queen's Chinese Student Association 2013 - 2017
Co-President *Kingston,ON*

- Led a team of 20 to promote cultural awareness and organize social events within the Queen's community

Conference on Industry and Resources Queen's University (CIRQUE) 2015 - 2016
Executive Team Member - Events Coordinator *Kingston,ON*

- Worked in a team of 14 to plan, organize and execute a 2-day conference that aims to expose engineering students to industry leaders who share their insights and experiences to demonstrate the versatility of an engineering degree

Greenovations 2014 - 2015
Committee Member *Kingston,ON*

- Promoted sustainability on campus by retrofitting student homes and organizing environmental awareness campaigns

TECHNICAL STRENGTHS AND OTHER RELEVANT SKILLS

Computer Languages	Python, MATLAB, C++, LabVIEW, Solid Edge, HTML COMSOL Multiphysics
Protocols & APIs	XML
Tools	LaTeX, Mathematica, shell, vim, bash, atom, Jupyter
Databases	MySQL
Nuclear Software	Cyclus, PyNE
Languages	English, Mandarin