# Philip Coyne

301-748-4482 4918 Bush Creek Way
pcoyne@umich.edu Monrovia, MD 21770

## Education

**University of Michigan- Ann Arbor** December 2012
*Bachelor of Science in Nuclear Engineering and Radiological Sciences (NERS)*

## Skills & Proficiencies

Software Proficiencies: Data analysis in R-programming, MatLab,. Nuclear transport: MNCPX, MNCPX-PoliMi, C++, MicroSkyshine, Microshield
Biology Laboratory Skills: Preparing DNA samples, running PCR, using ABI software to do SNP calling for genotyping experiments
Other: Microsoft Office: Word, Excel, Powerpoint

## Work Experience

**BON, Inc.**- Monrovia, MD Nov 2013 – Oct 2014
*Junior Data Analyst*
- Gathered and cleaned data for text analytics includes: clustering documents and comparing clusters
- Prepared training documents for supervised clustering of documents for categorization
- Acquired skills in R-programming and clustering techniques

**Galt, LLC**- Ypsilanti, MI April 2013 – Nov 2013
*Research and Development Engineer*
- Developed device for real time imaging of improvised explosive devices using MCNPX and MCNPX-PoliMi
- Simulated different detector geometries and scenarios with simulation software
- Determined probability of photon interaction with sodium iodide detectors, providing information for R&D
- Crafted detailed engineering analysis reports of different simulated scenarios, results, and findings

**Nuclear Nonproliferation Group**- Ann Arbor, MI June 2012 – Dec 2012
*Volunteer Engineer*
- Characterized detector materials in an effort to improve nuclear non-proliferation detection techniques
- Collaborated with Dr. Andreas Enqvist to set up, calibrate, and use liquid organic scintillators (EJ309) for customized detection of nuclear materials
- Collected and analyzed time series data using Matlab for proposed detector geometry

**Washington Internship for Students of Engineering (WISE)**- Washington, D.C. June 2010 – Aug 2010
*Intern*
- Earned one of 15 positions out of a national pool of applicants to spend 10 weeks with faculty members of various engineering honor societies to learn about the relationship between policy and engineering
- Researched small modular reactors (SMRs) and the nuclear licensing process
- Investigated the issues between old and new licensing practices within the Nuclear Regulatory Commission; documented recommendations for light water SMRS in a published paper

**National Cancer Institute** –Frederick, MD May 2007 –May 2008
*Student Research Fellow*
- Prepared DNA samples for finding single nucleotide polymorphism (SNP) genotyping
- Applied TaqMan probes on the DNA samples for the polymerase chain reaction (PCR) technique
- Determined chromosome associated with kidney disease by comparing control and cohort groups using the Applied Biosystem (ABI) computer analysis software tool
- Reported to Principle Investigator, Dr. Cheryl Winkler, and worked in a multidiscipline team of scientists and researchers on a daily basis

## Awards, Memberships & Publications

Published in WISE Conference in 2010, paper titled “Addressing How Light Water Modular Reactor Should Be Licensed”. http://www.wise-intern.org/journal/2010/PhilipCoyneWISE2010.pdf
American Nuclear Society Sponsorship for the WISE program

American Nuclear Society Member 2009 - Present

Cancer Research Training Award (CRTA) from National Cancer Institute 2007