Ryan Vincent Pencak

224 South Bodin Street, Hinsdale, IL 60521
(630) 750-1995 | ryan.pencak@bucknell.edu

EDUCATION

Bucknell University, College of Engineering | Lewisburg, PA   **Expected May 2018**
B.S. Computer Engineering
GPA: 3.5 • Dean's List

PROFESSIONAL EXPERIENCE

Argonne National Laboratory | Lemont, IL   **May 2017 – August 2017**
Summer Research Intern, Center for Nanoscale Materials, Theory and Modeling Group
- Algorithm development for OCEAN, an ab-initio software package for DFT and BSE calculations of chemical structures
- Utilizing Materials Project package pymatgen to develop a Python script for OCEAN input generation based on material ID
- Benchmarking pseudopotentials for XANES calculations to increase user experience and computational accuracy

Northwestern University School of Law | Chicago, IL   **July 2015 – August 2015**
Summer Research Assistant for Professor Philip Postlewaite
- Edited revised portions of Professor Postlewaite's International Tax Treatise
- Assisted with tax research
- Attended Professor Postlewaite's course on International Taxation

COMPUTER PROGRAMMING

Languages:
Python (proficient), **C** (proficient), **MIPS** (prior experience), **Java** (some experience), **Fortran** (prior experience),
JavaScript (exposure), **MatLab** (proficient), **Bash Script** (prior experience), **Unix Command** (fluent)

Computer Science Courses: Operating Systems- Fall 2017 (C), Computer Organization and Programming (C and MIPS),
Data Structures and Algorithms (Python), Intro to Computer Science (C), AP Computer Science (Java)

PROJECTS

Algorithm Development   **May 2017 – Present**
OCEAN, Argonne National Laboratory
- Developing Fortran code to implement the bi-Lanczos algorithm to transform matrices to tri diagonal form and compute the continued fraction for the eigenvalues
- Implementing Fortran linear algebra packages LAPACK and BLAS for parallel GMRES solution to non symmetric systems

Text Analysis   **Fall 2016**
Bucknell University Data Structures and Algorithms
- Data structures and algorithms project
- Python object oriented program for the comparison of text files

OTHER EXPERIENCE

Bison Investment Club | Lewisburg, PA   **September 2016 – Present**
Analyst, Information Technology Sector
- Working on a paper money portfolio to further knowledge in investment strategies

Engineers Without Borders Project Team | Rochester, NY   **January 2016 – May 2016**
Project Team Member
- Worked in a team to design a sustainable water treatment system for the city of Don Juan, Dominican Republic
- Researched various water purification methods and implementation costs for Don Juan's school system

OTHER SKILLS

Computer Aided Design: Ultiboard, Multisim, Altera Quartus II (some experience)

Circuits and Signals: Circuit Design and Analysis, Linear Systems and Signals Processing, VHDL, PCB Design, Soldering