## Patrick J. Lestrange

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Skills\_

Languages Python, Fortran77/90, C++, SQL, LaTeX, Perl

**Tools** numpy, scikit-learn, pandas

**Techniques** 

**Systems Admin** Maintained a 96 node compute cluster with >300 users in >20 academic departments

Experience \_\_\_\_\_

**Insight Data Science** 

Seattle WA

Fellow

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Jan. 2018 - present

**University of Washington** 

Seattle WA Sept. 2012 - June 2017

**Graduate Researcher** 

- Helped implement a solver for interior eigenvalues in order to model high energy spectroscopies
- Investigated the abilities of various commonly used models to describe new phenomena (out of sample testing)
- Implemented several nonlinear optimization algorithms (DIIS, Newton-Raphson) to converge quantum mechanical wave functions in the open-source software package, Chronus Quantum
- Derived and implemented several schemes to better describe the symmetries of non-relativistic wave functions

Gaussian, Inc. Wallingford, CT

Research Intern

Summer 2012 & Winter 2013

• Developed new algorithms to efficiently solve common quantum mechanical problems and implemented these techniques in a commercial software package, leading to several publications

**Education** 

**University of Washington** 

Seattle, WA

Ph.D. in Chemistry

Sept. 2012 - June 2017

York College of Pennsylvania

York, PA

B.S. in Chemistry

Sept. 2008 - May 2012

## **Honors & Awards**

2017 <b>Excellence Award</b> , American Chemical Society Chemi	cal Computing Group
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<sup>2015</sup> Clean Energy Institute Graduate Fellowship, University of Washington

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<sup>2014</sup> **Honorable Mention**, National Science Foundation Graduate Research Fellowship

<sup>2013</sup> **Honorable Mention**, National Science Foundation Graduate Research Fellowship