

# Alessandro Genova

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## Education

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- **PhD, Computational Chemistry**, Rutgers University January 2013 – February 2018
  - Advisor: Michele Pavanello
- **MS, Physical Chemistry**, University of Milan–Bicocca, Italy 2010 – 2012
  - Completed with a 110/110 perfect score
  - Thesis work at Leiden University, Netherlands March 2012 – September 2012

## Experience

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- **In/Out Tennis Startup**, Palo Alto, CA March 2017 – Present  
15,000 lines – Python 23% – TypeScript 55% – HTML 16% – CSS 6% – First batch sold out – 500,000 shots processed
  - *Full Stack Software Engineer*
  - In/Out uses computer vision to track the motion of the ball during a match or practice. I created an in-house cloud solution to store the users play data and compute statistics on it. I also developed the mobile app in charge of displaying such statistics and communicating with the device itself.
- **Pavanello Group**, Rutgers University, NJ January 2015 – January 2018  
10,000 lines: Fortran90 + MPI 100% – A calculation can span thousands of processors – 5 publications
  - *Research Assistant*
  - Development of high performance, massively parallel, scientific software to perform atomistic simulations from first principles. Being the most experienced developer in the group, I have been promoting best programming practices with my colleagues, and I was chosen to be project manager of several hackathons.
- **Self-Started Projects**, [alesgenova.com](#) November 2016 – Present
  - *Zest/RagePad*: a cloud based multi-platform journaling app used daily by thousands of users  
9,000 lines: Python 9% – TypeScript 63% – HTML 15% – CSS 14% – 10,000 Downloads – 4.8★
  - *PbcPy*: a library to simplify tasks involving chemical systems under periodic boundary conditions.  
2,000 lines: Python 100% – Saved my colleagues hundreds of hours – Object oriented and unit tested

## Awards, Conferences, Publications

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- Member of the Toptal freelance network (3% acceptance rate) December 2017
- Author of 7 peer-reviewed publications with over 60 citations. 2014 – 2017
- Graduate School Dissertation Fellowship 2016 – 2017
- Research Talk at the American Physical Society Meeting, Baltimore, MD March 2016
- Quantum Espresso Developers School, Trieste, Italy (20 students selected worldwide) January 2015
- Parallel Programming for HPC School, Temple University, Philadelphia, PA July 2014
- Telluride School of Theoretical Chemistry, Telluride, CO (30 students selected nationwide) July 2013

## Expertise

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- Software Development (Python, JavaScript, Fortran 90, C++)
- Parallel Programming (MPI, OpenMP)
- Data Manipulation and Visualization (Jupyter, NumPy, Matplotlib, Pandas)
- Backend (Django REST, SQL, Celery)
- Frontend and Mobile (Ionic, Angular, React Native, Redux)
- Generic Tools (Git, Bash, L<sup>A</sup>T<sub>E</sub>X, Linux, Inkscape)