

# Niall Dalton

41 Sleigh Rd, Chelmsford MA · 978-930-2002 · [niall.dalton12@gmail.com](mailto:niall.dalton12@gmail.com)

Website: <http://users.wpi.edu/~ndalton2/> · GitHub: <https://github.com/ndalton12>

## Education

---

- **Massachusetts Academy of Mathematics and Science** (Mass Academy), an advanced two-year secondary school program at **Worcester Polytechnic Institute** (WPI)
- **Freshman Coursework at WPI** in Discrete Math (CS 2022), Algorithms (CS 2223), Mechanics (PH 1111), Calculus (MA 1021-24), Robotics (RBE 1001), Macroeconomics (ECON 1120), Psychology (PSY 1400), and Literature (EN 2252, EN 2243); **GPA: 4.00**
- **Certificates:** MITx Introduction to Data Science (grade: 97%; view at <http://www.goo.gl/XwiHLA>)
- **Awards:** WPI Charles O. Thompson Scholar, 1<sup>st</sup> place CyberPatriot Gold Division in MA, Xerox Innovation Award

## Programming Projects

---

See my personal website listed in the header for more extensive details on these projects.

- **Quantum Algorithm for Sum of Square Roots Problem** (C/Shell)
- **Python and Machine Learning**
  - i. <https://github.com/ndalton12/Python-Learning>
  - ii. Contributor to Django web framework
- **Shifting Morals: A Study in Probabilistic Machine Ethics** (Web/ Django)
  - i. <https://shifting-morals.herokuapp.com/> (may take a few seconds to load initially)
- **Decisions: The College Finance Game** (Android)
- **Predicting Stock Prices with a Recurrent Neural Network** (Java DL4J)

## Computer Skills

---

- **Programming:** Proficient in Java, HTML/CSS, Bootstrap, Django web framework, Python and Python data science tools (Pandas, NumPy, TensorFlow, scikit-learn, Keras, XGB, etc.); Working knowledge of C, Mathematica, Android Development, Git/GitHub, Vim, DL4J; Familiarity with Libquantum (Quantum mechanical simulations), Shell and Unix experience, Basic shell scripting
- **Media creation:** Word, Excel, PowerPoint, GIMP (photo editing), Google Suite (slides, docs, sheets, etc.), Sony Vegas, Adobe Premiere, Audacity, Basic LaTeX skills

## Experience

---

- **Curious Science and Learning: Math and Robotics Instructor** (4 years, ongoing)
  - i. Personalized math tutoring and robotics course teacher
  - ii. Director of middle school level for summer robotics camp
- **Massachusetts Bay Youth Lacrosse League Associate Official** (2 years)
  - i. Certified in refereeing and organization of gameplay
  - ii. Officiated youth lacrosse games and ensured player safety
- **Volunteer at multiple STEM events**
  - i. Computer science and robotics camp teacher, tournament scorer, organizer, etc.