

Thomas Ottaway

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EDUCATION

- **Brown University** Providence, RI
Applied Math-Computer Science GPA: 4.0 *Expected Graduation May 2022*
 - **Notable Coursework:** Applied Dynamical Systems, Numerical Optimization, Discrete Math, Analytical Mechanics, Information Theory, Introduction to Computer Systems, Probability and Statistics, and Chinese
- **Albany High School** Albany, NY
Advanced Regents Diploma GPA: 97% *Sept. 2014 – June 2018*
- **Independent Learning**
 - Independent reading of computer vision research papers (primarily ResNets and variations such as Wide ResNets, Stochastic Depth, Pyramid nets etc.)

WORK EXPERIENCE

- **NYS ITS/Health Research Institute (JavaScript, Python, SQL)** Albany, NY
Software Developer *Summer 2018 - Summer 2019*
 - Created new data entry processes for labs both inside and outside Wadsworth Center
 - Developed and maintained scripts to process instrument data for entry into the internal LIMS system
 - Interfaced with a legacy database containing 200+ tables
 - Developed scripts for automated regression testing
 - Built automated systems for HL7 message generation to expand Remote Order Entry accessibility
- **LingView (JavaScript, Node.js, React)** Brown University
Developer *Sept. 2018 - May 2019*
 - Built a front-end interface for viewing and searching through a linguistic corpus
 - Collaborated with other students and faculty to determine project goals and priorities
 - Explored various search technologies such as Fuse, LUNR, and SOLR

PROJECTS

- **Neural Nets for Solving ODEs/PDEs** *Aug. 2019 - Present*
 - Replicating and expanding upon this [paper](#) using lower level pytorch functions
 - Experimenting with effect of mixing activation functions to model different kinds of functions
 - Implementing custom optimization algorithm with quadratic convergence
- **Rocket Stabilization** *Apr. 2019 - May 2019*
 - Applied techniques from the field of dynamic systems to study the stability of various control systems ([final paper](#))
 - Identified a bifurcation point as we tuned our control function
- **Exploring Numerical Methods** *Oct. 2018 - Apr. 2019*
 - Explored algorithms for finding numerical approximations to differential equations using Python's numpy library
 - Created visualizations for systems such as the 3-D wave equation and particles in chaotic systems

SKILLS

- **Programming Languages/Frameworks** : Python, C, JavaScript, CSS, SQL, MATLAB, L^AT_EX, Django, PyTorch, Pyret, Racket, Flask, Node, React
- **Communication & Adaptability**: Ability to enter a team of diverse people, listen closely, and work collaboratively to push a project forward
- **Legacy Code Bases**: Maintaining, troubleshooting, and adding features to large scale legacy code bases

ACTIVITIES

- Juggling (up to five objects), rock climbing, running, blues dancing, unicycling, bicycling, music