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 Opimazation, 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 convergance
- **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, LaTeX, Django, PyTorch, Pyret, Racket, Flask, Node, React
- **Communication & Adaptibility**: 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