Anthony Stone

Curriculum Vitae

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Education

- **Southern Connecticut State University**—B.S. in Computer Science, minor in Mathematics, (GPA: 4.0)
- **Current Coursework**—*Theory of Programming Language*, *Operating Systems*, *Distributed Systems*
- **Previous Coursework**—*Independent Studies in Math and Computer Science*, *Algorithm Analysis*, *Discrete Mathematics*, *Linear Algebra*

Research Interests

- **Theoretical Computer Science**—Approximation algorithms, combinatorial optimization, algorithm analysis, and time complexity.

Research Experience

- **UAV and CNN for Concrete Crack Detection**—Repository
  - Independent study in the Fall 2025 Alaa Sheta exploring efficient computer vision models, as well as image processing, and wireless connectivity.
  - Evaluated real-time crack detection in simulated bridge environments utilizing a transfer-learning convolutional neural network, and a drone platform.
- **Metaheuristics for ANN Training**—Repository
  - Research assistant position in the Summer 2025 session with Alaa Sheta analyzing heuristic algorithms, neural networks for regression tasks, and data science workflows.
  - Trained and evaluated single layer feed-forward neural networks using metaheuristic search algorithms.
- **Simulations of Dynamical Systems**—Repository
  - Independent study in the Spring 2025 session with Daniel Cicala investigating differential equations, and discrete difference equations, focusing on numerical solving techniques.
  - Developed scripts to compute and visualize ordinary and stochastic differential equations.

Teaching Experience

- **Peer Academic Leader**—Teaching assistant through CASAS.
  - Fall 2025—*Introduction to Programming*.
  - Spring 2026-present—*Data Structures* and *Computer Systems*.
- **Tutoring**—One-on-one tutoring sessions through CASAS.
  - Computer science courses from *Introduction to Programming* through *Algorithm Analysis*.
  - Math courses from *Algebra Basics* through *Linear Algebra*.

Presentations

- ***UAV and CNN for Concrete Crack Detection***—Presented to the SCSU Computer Science Club.
- ***Simulating Dynamical Systems in Python***—Presented to the SCSU Math Seminar.

Other Projects

- **Honors Thesis**—Early Repository
  - Pursuing an Honors Thesis in the Fall 2026—Spring 2027 session, applying graph theory to sudoku solving.
- **Educational Resources**—*Introduction to Python*, *Data Structures*, and *Computer Systems*
  - Developed comprehensive lecture notes designed to function as a standalone guide and resource for students.