

Andrew Briasco-Stewart

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Education

Sept 2025	Boston University <i>PhD. Computer Science</i> <i>Advisor: Manos Athanassoulis</i> DiSC (Data-intensive Systems and Computing) Lab	GPA in Major: N/A/4.0 Cumulative GPA: N/A/4.0
May 2024	Northeastern University <i>B.S. Computer Engineering / Computer Science</i> <i>Minor in Computational Data Analytics</i> - College of Engineering 2024 Class Marshal; Dean's List every eligible semester - Elected to Tau Beta Pi, IEEE Student Chapter, and Order of the Engineer - Secretary of Tau Beta Pi chapter and Husky Competitive Programming Club	GPA in Major: 4.0/4.0 Cumulative GPA: 4.0/4.0

Work Experience

Jul 2023 – Dec 2023	MORSE Corp. , Cambridge MA <i>Software Engineer - Artificial Intelligence Test and Evaluation (AI T&E)</i> - Refactored 3 libraries to follow modern production standards in preparation for open sourcing - Sped-up feature implementation speed by 33% with robust CI/CD pipelines in GitLab - Squashed or mitigated complex bugs across multiple internal AI T&E libraries	Python, Git, ML, Pandas, Scrum
Jun 2022 – Jan 2023	Wolters Kluwer , Waltham, MA <i>Software Engineer – UpToDate Website Home Team</i> - Re-styled existing topic feedback form to enhance experience, reducing mis-filled forms by 40% - Maintained security compliance by upgrading versions/dependencies - Improved performance by refactoring legacy code and removing bugs / broken functionality - Contributed code and UI designs to 3 major website updates deployed across the globe	Java, SQL, Git, OOD, Linux, Scrum
Jun 2021 – Dec 2021	Intel Corporation , Hudson, MA, <i>Validation Engineer – Server Architecture Team</i> - Helped validate IP designs in OVM/UVM based testing environment - Through constraint randomization of IP configuration, discovered 3 major and many minor issues with design. Worked with architects to resolve discovered issues	Git, Verilog, Verdi, Scrum
Jun 2020 – Aug 2020	The MITRE Corporation , Remote, MA <i>Intern, Summer Technical Aide</i> Researched the potential of leveraging AI & AI platforms for areas of 5G, 6G, 7G+	Research, Literature Review

Relevant Skills and Coursework

- Communication & Design:** Software Development Life Cycle (SDLC), Technical Writing, Web Development, Network Architecture, Rapid Prototyping, Scrum, Object oriented design (OOD), React Framework
- Programming languages:** Python, C/C++/C#, Java, JavaScript, OCaml, DLang, Assembly, Bash, SQL, MATLAB, HTML, CSS, SQL, MongoDB, P4, Verilog, ACL2S
- Software/Hardware:** Git/GitLab/GitHub, Linux/Unix, Windows, MS Suite, FPGAs, Jupyter Notebook, Unity, LaTeX, Xilinx Vivado, Bootstrap, Arduino
- Undergraduate Coursework:** Compilers, Machine Learning & Pattern Recognition, Computer Graphics, Web Development, Foundations of Software Engineering, Computer Systems, Database Management Systems, Object Oriented Design, Programming Languages, Data Visualization, Fundamentals of Cybersecurity, Fundamentals of

Networks, Logic & Computation, Hardware Software FPGA Design, Discrete Structures, Algorithms & Data, Fundamentals of Digital Design & Computer Organization, Fundamentals of Linear Systems, Embedded Design, Differential Equations & Linear Algebra

Selected Technical Projects

Jan 2024 – Apr 2024	Custom Language Compiler – Compilers – OCaml, C, Assembly • Piece-by-piece construction of a custom language and compiler with python-like features • Compiler written in OCaml with C-library backend integration, compiles to x86-64 assembly • <i>Features</i>: Runtime types (int, bool, tuple, functions, strings), arithmetic, conditionals, list operations, tail recursion, garbage collection
May 2023 – Apr 2024	Rhythm Rehab Revolution – Controller and Unity game for stroke rehabilitation – C#, Unity • Created easily navigable menus and levels for the game in Unity • Implemented logic to display notes of MIDI sound track and track player accuracy during game
Jan 2023 – Apr 2023	National Parks Tracking and Review Website – Web Development – JS, React, MongoDB • Small-scale full web application about National Parks review & rating • <i>Frontend</i>: React framework with Bootstrap; <i>Backend</i>: MongoDB with API to national parks site • <i>Pages</i>: Home, search, login, profile, details
Mar 2022 – Apr 2022	AES Encryption on FPGA – Hard./Soft. FPGA Design – FPGA, Python • Implemented AES encryption algorithm in software, and in hardware on FPGA • Hardware synthesized from subset of C. FPGA on PYNQ board accessed with Jupyter notebook • Analyzed and compared performance between the software and hardware versions
Mar 2022 – Apr 2022	Freecell – Object Oriented Design – Java, OOD • Implemented a game of Freecell in java using model, view, controller (MVC) pattern • Built up gradually with text interface, then graphical, then extended with multi-move
Dec 2021, 22, 23, 24	Advent of Code – adventofcode.com – Python, C++, Rust, Problem Solving, Algorithms • Solve programming tasks that range in difficulty, generally increasing • 2021, 2023: problems completed in python. 2022: problems completed in C++
Sep 2019 – Dec 2019	Museum Game Exhibit – Cornerstone of Engineering 1&2 – Arduino, C++ • Designed, built, tested, and displayed at the Museum of Science in Boston • A Minecraft themed game attraction to teach young kids about agricultural sustainability • MATLAB GUI display with Arduino controlled circuitry for physical interaction

Publications, Presentations, Research

Jan 2024 – May 2024	FPGA Packet Src/Dest Extraction – Research & Publication – FPGA, Networking, P4 • <i>Extracting TCPIP Headers at High Speed for the Anonymized Network Traffic Graph Challenge</i> - Zhaoyang Han, Andrew Briasco-Stewart (Northeastern Univ.), Michael Zink (UMass Amherst), Miriam Leeser (Northeastern Univ.) – IEEE 2024 HPEC Conference – Graph Challenge Innovation Award Recipient • Designed a custom FPGA extern function to extract packet source and destination information • Utilize P4 framework to route packets to and from the extern to collect information for network graph reconstruction which can be used for Graph Basic Linear Algebra Subprograms • Aim to achieve gigabit or faster processing speeds with FPGA acting as the network interface
Aug 2023 – Sep 2023	A Semester at University – DConf'23 computer language presentation – https://dconf.org/2023/ • Traveled with professor and 3 other students to DConf'23 in London to give a combined talk • Presented experience learning the D programming language in a semester to ~70 people

Interests

- Sci-Fi/Fantasy Books
- Video Games

- Rockets/Intricate devices, HPC
- Hobbies: Programming/Logic Puzzles, Running,