curriculum vitæ of
S. D. V. Stephens
Neurobioengineering · Mathematical Physics
Philosophy · Cognitive Science

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Education

Nov. 2019 – May 2022 **H.S.D.** Pre-Law Track — Judge Barefoot Sanders Law Magnet, TX, USA

Graduated with Honors, Distinction, and a Distinguished Level of Achievement per TEA.
Coursework included dual credit and 13 AP Exams.

Additional Education

Aug. 2025 – Present Coursework in Mathematics (Audit) — Harvard University, MA, USA

Courses: Studies in Algebra and Group Theory (55a) · Studies in Real and Complex Analysis (55b) · Modern China: 1894 – Present (38) · Biology and Complexity (2212) · Critical Theory (89)

Jan. 2025 – May 2025 Coursework in Mathematics, Neurobiology, & Music — Wabash College, IN, USA

Courses: Complex Analysis · Non-Fiction Creative Writing · Linguistics · Sociolinguistics · Principles of Neuroscience · Organ Performance

July 2024 – Nov. 2024 Coursework in Sociology and Social Ecology — Institute for Social Ecology, VT, USA

Courses: Legacies of Environmental Radicalism

Jan. 2024 – May 2024 Coursework in Mathematics (Audit) — University of Texas at Dallas, TX, USA

Courses: Combinatorics · Advanced Calculus

July 2023 – Jan. 2024 Coursework in Mathematics, Philosophy, Political Science, & Music — Kenyon College, OH, USA

Courses: Abstract Algebra I · Contemporary Mathematics Seminar · Symbolic Logic · Philosophy of Natural Science · Piano Practicum · Violin Practicum · Quest for Justice · STEM Research Methods

Honors

Jan. 2025 – Jun. 2028 Honors and Dean's Scholar — Wabash College

Jun. 2023 – Jun. 2028 KEEP-STEM Scholar — National Science Foundation & Kenyon College

Aug. 2020 – Jun. 2022 AP Capstone Scholar — The College Board

Aug. 2019 – Jun. 2022 AP Scholar, Distinction and Honors — The College Board

Research

Sep. 2025 – Present Biostatistical Researcher — Beth Israel Medical Center & Harvard Medical School

This study is developing and validating CICADAS (Causal Inference for Critical-Care Anti-Seizure Treatment with Disease Dynamics, Automated PKPD/Trial Simulation, and Survival Optimization), a novel methodological framework that enables extraction of unbiased causal treatment effects from observational critical care data where randomized controlled trials are challenging to conduct. My current role, supervised by Dr. M. Brandon Westover, involves analyzing the PKPD interactions for diseased patients and modeling a predictive formula for Y_t outcomes. This would optimize time-based and quantitative drug administration, potentially saving the lives of thousands of seizing ICU patients. We *may* additionally be working with whole-brain mathematical simulation from the Human Brain Project in France under Dr. Viktor Jarsa to test predicted outcomes via seizure simulation.

Nov. 2024 – Present Principal Investigator — Independent Mathematical Research

Developing and exploring possible theoretic foundations for polyadic algebraic structures through extensions of classical group theory via changes in the adicity of operations on various algebraic structures. Preliminary axiomatization underway; currently seeking faculty advisor for continued development. Work currently consists of rudimentary novel theorem and proof construction. Interested in the possibility of lie polyadic algebras and/ or groups for differential equations.

Nov. 2022 – Jan. 2024 Research & Literature Review Collaborator The University of Texas at Dallas

Collaborator; worked on a meta-analysis on the Bouba-Kiki effect with regards to children with Misophonia and/or Autism Spectrum Disorder. Meta-analysis incomplete; took break for college reasons, will return to continue the meta-analysis with Dr. Abdi within the next few years.

Aug. 2021 – May 2022 Principal Investigator Microbio. Dept. at The School for Health Professions in Dallas

Discovered novel functions of bacteria within the gut microbiome of *Z. atratus* related to mechanisms of action for the biodegradation of low density polyethylene and polystyrene. Resulted in a paper submitted to the College Board. Lab experience and guidance facilitated by Dr. Harrington.

Work Experience

Sep. 2025 – Present Biostatistical Researcher Beth Israel Medical Center & Harvard Medical School

Jan. 2025 – Apr. 2025 Part-Time Barista 1832 Brew at Wabash College

Sep.2024 – Jan. 2025 Sales Representative Walgreens

Jan. 2024 – Jun. 2024 Stylist and Sales Expert Fossil Group, Inc.

May 2023 – Aug. 2023 Summer Barista Nordstrom, E-Bar Coffeehouse

Aug. 2021 – Nov. 2021 Dallas City Council Research Intern City of Dallas

Conducted research on smart-city development initiatives for District 11 under supervision of the city manager and council member 11. Analyzed urban planning data and technology integration strategies.

Skills

Technical: LaTeX(document automation, custom templates, tikz, and more; extremely well-versed), Python (CLI frameworks, automation, data processing), Office Suite, Google Suite, HTML 5, R; able to learn new programming languages quickly and efficiently; experience with Neovim (custom configurations, advanced workflows, automation, JSON data architecture integrated from within the command line), Vim, VS Code, and other editors. Experience with custom terminal design, cross-platform compatibility, ssh workflows, and general task automation.
Language: Reading comprehension of Spanish, French, and adaptability to learning other languages quickly thanks to linguistic training background[1].

Technical Projects

Jan. 2023 – Present Lead Developer Github: https://github.com/sdvstephens/uni

Academic Workflow Automation Platform

1. Architected an integrated productivity suite with 3 main python CLI tools (named academic, grades, and alec) that process over 500 daily academic operations; sub-second response times (with the exception of a function not listed that is still being worked on)
2. Implemented automated LaTeX document generation within Neovim, sourced from the CLI outputs directly from the terminal, thus reducing computation time by nearly 70% with dynamic master file creation and metadata tracking across 12+ courses
3. Designed a human-readable JSON data architecture supporting Git version control, achieving 99.9% backup reliability and seamless cross-device synchronization
4. Developed custom Neovim workflows with automatic figure insertion and compilation systems, improving daily productivity through intelligent automation

The beta is currently released as a FOSS project, inspired by the late Gilles Castel; current users include former professors, students, and industry professionals. This is a personal passion project of mine dedicated to allowing students to have an entire coding-based workflow within the terminal (taking lecture notes, generating math diagrams, etc.). Currently undergoing a major overhaul by moving everything to emacs (heavily modified doom distro) and generating live LaTeX in Org mode, inspired by Karthik's work.

[1] From participation in the North American Computational Linguistics Olympiad (NACLO) & misc. coursework

Extracurricular Activities

2024 – Present

Collaborative Manuscript in Political Philosophy — Kenyon College & Northeastern University

Co-authoring inter-institutional manuscript with a Northeastern history and education student and researcher exploring intersections of political theory, educational theory, and ethics. Work in progress.

2023 – Present

Mathematics Lecturer — YouTube

I have a YouTube channel and website (both are a work-in-progress) where I have been designing worksheets, problem sets, and lecture notes to go along with the multitude of lecture videos I record. These lectures will cover everything from elementary pre-algebra, to real and complex analysis and beyond. The handle is @Vichaama. Currently on pause.