

JACOB BECHTEL

Curriculum Vitae

South Bend, IN | jbechte2@nd.edu
jacobbechtel.com | www.linkedin.com/in/jacob-bechtel

EDUCATION

University of Notre Dame Notre Dame, IN
Ph.D., Computer Science and Engineering Expected Completion: May 2030
Research Areas: Content-Addressable Memory, EDA Education, Adiabatic Computing
Advisors: Matthew Morrison, X. Sharon Hu

M.S., Computer Science and Engineering May 2025
Specialization: Computer Architecture and Nanotechnology
Advisor: Matthew Morrison

B.S., Computer Engineering May 2024
Minor: Engineering Corporate Practice

RESEARCH EXPERIENCE

University of Notre Dame Notre Dame, IN
Graduate Research Assistant, Computer Science and Engineering Aug 2024 – Present

- Designing a new logic synthesis method for adiabatic computing.
- Modernizing Eva-CAM and integrating it with our functional simulator, CAMASim.
- NSF Chip Design Hub Mflowgen installation and pipecleaning.

TEACHING EXPERIENCE

University of Notre Dame Notre Dame, IN
Lab Instructor, Computer Science and Engineering Jan 2026 – Present

Fundamentals of Computing (CSE 20311)
This course introduces fundamental concepts and principles of computer science, from formulating and analyzing a problem, to designing, implementing, and testing a program. Using data and procedural abstractions as basic design principles, students learn to define basic data structures and to apply algorithms for operating on them.

Graduate Teaching Assistant, Computer Science and Engineering Aug 2024 – Dec 2025

Digital Integrated Circuits (CSE 30311) Fall 2024, 2025
This course, which builds upon the CSE 20221 Logic Design course, is where students learn the principles, components, and methodologies for design of large-scale digital circuits, and their integration into modern computing systems.

Signal Processing Fundamentals (CSE 30353) Spring 2025
This course introduces time/transform domain representations, convolution operations, Fourier series signal expansions, Fourier and Laplace transform analysis of linear

systems, discrete time Fourier systems, fast Fourier transforms, and digital information processing.

ACES Peer Mentor, Computer Science and Engineering

Jan 2023 – May 2024

- Introduction to Electric Circuits (EE 20223)
- Fundamentals of Computing (CSE 20311)
- Discrete Mathematics (CSE 20110)
- Logic Design and Sequential Circuits (CSE 20221)
- Data Structures (CSE 20312)
- Systems Programming (CSE 20289)

PUBLICATIONS & PRESENTATIONS

1. J. Bechtel, M. Morrison, and S. Hu, “Extending EvaCAM with Variation Modeling for Content Addressable Memories”, DAC Young Fellows, Long Beach, CA, July 27, 2026.
2. M. Morrison and J. Bechtel, “Digital Tapeout Course for 103 Students in One Semester using the Cadence Flowtool“, CadenceLIVE Annual Conference, San Jose, CA, Conference April 16, 2026.
3. M. Morrison and J. Bechtel, “CSE 40457 - HLS RISC-V Tapeout Project”, Apple NSI@HBCUs Convening, Cupertino, CA, July 29, 2025.
4. M. Morrison and J. Bechtel, “CSE 40457 - HLS RISC-V Tapeout Project”, Lockheed Martin Visit Day, Notre Dame, IN, September 17, 2025.

GRANTS & FELLOWSHIPS

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| 1. Rev. James A. Burns Fellowship (\$5000 annually) | Aug 2026 |
| 2. DAC Young Fellows Travel & Registration Grant to DAC 2026 (\$2000) | Jul 2026 |
| 3. Travel Grant to Apple NSI@HBCUs Convening 2025 (\$1,500) | Jul 2025 |

PROFESSIONAL AFFILIATIONS

IEEE Student Member #102195784	2026 – Present
ACM Student Member #9834916	2026 – Present

PROFESSIONAL EXPERIENCE

University of Notre Dame	Notre Dame, IN
<i>Assistant Rector, Department of Residential Life</i>	Aug 2024 – May 2025, Aug 2026 – Present
Code Ninjas	Parker, CO
<i>Camp Director</i>	Seasonal May 2022 – Aug 2024

HONORS & AWARDS

Teaching Assistant Award	May 2026
Eagle Scout	Dec 2016