

David Bears

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First-year Ph.D. student in Computer Science at Georgia Tech with a vision to teach computer science at university. Currently looking for an internship for summer 2023 in software or hardware development.

Education

Georgia Institute of Technology

Computer Science Ph.D.

Target graduation May 2027 (first semester, no GPA to report)

Virginia Polytechnic Institute and State University

Computer Science Bachelor of Science with Minor in Mathematics

Graduated December 2021 (GPA 4.00 / 4.00)

Relevant courses: CPU architecture, algorithms, parallel computing, cryptography, machine learning.

New River Community College

Engineering AA&S with Computer Science Specialization

Graduated May 2020 (GPA 4.00 / 4.00)

Experience

Undergraduate Research at Virginia Tech

May 2021 – October 2022

Designed, optimized, and tested Deflate compressor and decompressor RTL hardware (ASIC) modules for hardware-accelerated memory compression.

Maintained flexible, parameterized designs that may be easily adopted for specific needs.

Used the Scala language, Chisel library, Gradle build tool, Verilog HDL, Bash script, Git version control, Slurm workload manager, and Synopsys Design Compiler throughout the project.

Personal Projects

Worked on numerous personal programming projects, primarily in Java and JavaScript since 2009.

Publications

“Translation-optimized Memory Compression for Capacity”, MICRO 2022

Skills

Programming Skills

Proficient in programming Java, C, Scala, Chisel, and Bash. And some experience in JavaScript, Haskell, Julia, Verilog, Groovy, Scheme, MatLab, Pascal, Ruby, Prolog.

Proficient in functional, object-oriented, and procedural programming.

Proficient in multi-thread and multi-process programming, and experienced with OpenMP and MPI.

Proficient using Git version control and Gradle build tool.

Technical Skills

Proficient using Linux and Linux command line.

Proficient using word-processor, spreadsheet, and presentation software.

Certified: Microsoft Technology Associate Security Fundamentals.

Other Skills

Mathematics: linear algebra, multi-variable calculus, differential equations, cryptography, graph theory, combinatorics, statistics, and proofs.

Soft skills: problem solving, written and verbal communication, and attention to detail.