Benjamin Michalowicz

http://btmichalowicz.github.io | https://github.com/BTMichalowicz | (201) 961-2280
benjaminmichalowicz98@gmail.com | https://www.linkedin.com/in/benmichalowicz/

EDUCATION

STONY BROOK UNIVERSITY
B.S, COMPUTER SCIENCE
May 2020 | Stony Brook, NY

M.S, COMPUTER SCIENCE
May 2021 | Stony Brook, NY

Advisor: Dr. Barbara Chapman

THE OHIO STATE UNIVERSITY
PH.D, COMPUTER SCIENCE & ENGINEERING
Aug 2021-Present

Advisor: Dr. Dhabaleswar K. Panda

COURSEWORK

UNDERGRADUATE
Computer Science I, II, III
Systems Fundamentals I, II
Calculus I, II, III
Operating Systems
Technical Communications
Analysis of Algorithms
Principles of Programming Languages
Principles of Database Systems
Advanced Sys. Prog. in UNIX/C
Software Engineering

GRADUATE
Data Science Fundamentals
Principles of Programming Languages
System Security
Quantum Computing/Applications
Computer Networks
Analysis of Algorithms
Computational Geometry

SKILLS

PROGRAMMING
Java • C • Python • Shell Scripting
•Qiskit • Fortran • C++
• SQL • LaTeX
• MIPS Assembly

OPERATING SYSTEMS
Windows • *-nix • OS X

TECHNOLOGIES
MySQL • NumPy • SciKit-Learn •
Seaborn • Git • SQL Server •
Intel Pin • LLVM, Cray, GNU Compilers

WORK EXPERIENCE

THE OHIO STATE UNIVERSITY | RESEARCH ASSISTANT
May 2021-Present | Columbus, Ohio
- HPC research in Dr. Barbara Chapman's NOWLAB, fousing on the further research and development of MVAPICH along with research into other HPC areas, such as Big Data, Virtualization, and Parallel File Systems.

STONY BROOK UNIVERSITY | RESEARCH ASSISTANT
August 2020- May2021 | Stony Brook, New York
- HPC research in Dr. Barbara Chapman's Exasca||ab, focusing on testing and benchmarking HPC clusters and architecture. Researching compiler toolchains, OpenMP behavior, and more on the A64FX processor.

STONY BROOK UNIVERSITY | TEACHING ASSISTANT
Aug 2020 - Present | Stony Brook, New York
- Fall 2020: Held weekly office hours, led weekly recitations, and helped students understand material in Stony Brook University's CSE 216 course. Designed recitation questions. Spring 2021: Worked with fellow TA's and the course lecturer for CSE 320: Systems Fundamentals II

BAE SYSTEMS | SOFTWARE TECHNICAL INTERN
May 2019 - Aug 2019 | Totowa, New Jersey
- Worked with SW developers to re-design a code generation tool from interface definition files with a backing symbol table in C#. Worked with fellow interns to redesign the mentor/mentee program for incoming interns and YearOne employees.

PROJECTS

MVAPICH | MPI IMPLEMENTATION W/ NOWLAB
April 2021 - July 2021
- Working in the NOWLAB in various aspects of MVAPICH, from debugging variants on AWS-clusters/ARM architecture to benchmarking the latest releases and builds on Intel and AMD XSEDE clusters.

FLASH | HPC PHYSICS SIMULATIONS AT SCALE
April 2021 - July 2021
- Worked with faculty and Grad students on the Ookami cluster with the FLASH multi-physics software, improving its performance through vectorization and SVE instructions. Testing, optimizing the Fortran-based application through numerous compiler toolchains as I transition to my PhD at The OSU.

OOKAMI/A64FX RESEARCH HIGH-PERFORMANCE COMPUTING
August 2020-May 2021
- Research and analysis of the Ookami Cluster at Stony Brook; research of OpenMP behavior across several compiler toolchains and applications on Ookami and the Fugaku supercomputer on performance, correctness, and efficiency.

CHOR-DNS | COURSE PROJECT | CO-DEVELOPER
October-December 2020 | Stony Brook, NY
- Course project in team of four: studied the Chord ring structure for DNS queries and comparing its performance to the traditional DNS hierarchy. Ran unit/integration tests on a DistAlgo setup, made configuration files for launching.

HONORS/AWARDS

INTERNATIONAL SYMPOSIUM ON COMPUTER ARCHITECTURE
Phoenix, AZ, 2019
- ISCA uArch Workshop attendee on awarded scholarship