

Benjamin Michalowicz

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EDUCATION

STONY BROOK UNIVERSITY

B.S., COMPUTER SCIENCE

May 2020 | Stony Brook, NY

Clubs/Orgs:

Marching Band

Stony Brook Computing Society

TKD at SBU

Stony Brook Live

M.S., COMPUTER SCIENCE

(Exp.) May 2021 | Stony Brook, NY

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

SKILLS

PROGRAMMING

Java • C • Python • Shell Scripting

• Qiskit • Fortran • C++

• SQL • HTML

• CSS • Javascript • \LaTeX

• MIPS Assembly

OPERATING SYSTEMS

Windows • *nix • OS X

TECHNOLOGIES

MySQL • Node.js • NumPy •

SciKit-Learn • Seaborn/data

visualization • Git • SQL Server •

Intel Pin • LLVM, Cray, GNU Compilers

PERCUSSION

• 2007-Present

• Marching, Orchestral, Drum Set

• Leadership in Marching Band
(2015-Present)

• Various Music Awards

(2012-Present)

WORK EXPERIENCE

STONY BROOK UNIVERSITY | RESEARCH ASSISTANT

August 2020-Present | Stony Brook, New York

- High-Performance Computing research in Dr. Barbara Chapman's Exascale lab, focusing on testing and benchmarking new HPC clusters and architecture. Researching Compiler toolchains, OpenMP behavior, and more on the A64FX processor.

STONY BROOK UNIVERSITY | TEACHING ASSISTANT

Aug 2020 - Dec 2020 | Stony Brook, New York

- Held weekly office hours, led weekly recitations, and helped students understand material in Stony Brook University's CSE 216 course (Programming Abstractions). Designed recitation questions and collaborated with the course lecturer.

SBUHACKS PLANNING COMMITTEE | SOCIAL MEDIA MANAGER

March 2020-Dec 2020 | Stony Brook, New York

- Keeping social media accounts up to date (Instagram, Twitter, Facebook, etc.) and otherwise helping organize the SBUHacks hackathon for the 2020 MLH season; helped run Stony Brook's first-ever virtual hackathon

STONY BROOK UNIVERSITY | UNDERGRADUATE RESEARCH ASSISTANT

May 2018 - May 2019, Dec 2019-Feb 2020 | Stony Brook, New York

- Worked with PhD students in the COMPAS lab on projects focusing on microarchitecture and cloud infrastructure.

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

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.

TOPOLOGIC | LIBRARY TO SIMULATE DFAS | CO-DEVELOPER

June-August 2020

- Simulates DFAs and Probabilistic DFA's using context switching. Programs can start at multiple vertices, which may be run in parallel.

MODIFICATIONS TO XV6 | COURSE/PERSONAL PROJECT

September-December 2019 | Stony Brook, NY

- Modified the xv6 OS to understand OS concepts and for personal curiosity; mouse driver, CPU scheduling, file systems, and signaling/process management

GERRYMENDER | CAPSTONE PROJECT, DB DESIGN, DATA MANAGEMENT

September-December 2019 | Stony Brook, NY

- Capstone Project for CS major aimed to fix political Gerrymandering; designed databases using My/SQL; data pre-processing and maintenance through Python

HONORS/AWARDS

INTERNATIONAL SYMPOSIUM ON COMPUTER ARCHITECTURE

Phoenix, AZ, 2019

- ISCA uArch Workshop attendee on awarded scholarship