

Eric Khalil Zacharia

Data Science – Masters Student

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EDUCATION

University of Chicago | Chicago, IL | *M.S. in Computer Science, Specialization in Data Analytics* **December 2021**

☛ Courses: Machine Learning, Computational Data Analysis, Algorithms, Advanced Python, Databases, Web Development

Syracuse University | Syracuse, NY | *B.S. in Aerospace Engineering*

May 2016

☛ Awards: George M. Berry Award for Outstanding Design Achievement in Engineering

SKILLS AND LANGUAGES

Proficient Python, Pandas, NumPy, Git, Excel, HTML5, CSS3, Word, Windows & Mac OS

Beginner R, JavaScript/ES6, MySQL, Flask, React, LaTeX

TECHNICAL RESEARCH & PROJECT EXPERIENCE

Various Projects | Chicago, IL

September 2020 – Present

- ☛ Programming: Developed LRU cache, AVL tree, interactive Blackjack game, text-completion suggestions, Manhattan distance calculator with Google Maps API, Nand2Tetris projects including a personal “Blob” video game, translators and compilers between machine code, assembly language, virtual machine code, and the high-level Jack programming language
- ☛ Web Development: Personal wedding website, group chat web application with asynchronous JavaScript and REST API written in Python with Flask, Pinterest mood board clone with Bing image search API, and a Content Management System for a web journal that supports posts and comments

Speaker Recognition System | Chicago, IL

September 2020 – December 2020

- ☛ Wrote a Python program that compares scripts of text from two known speakers and one unknown speaker as input, and outputs the speaker who most likely spoke the unknown script
- ☛ Implemented an open addressing hash-table, a Markov Model, and Seaborn plots displaying run time analysis

Buy vs. Rent Calculator | Wichita, KS

November 2017 – Present

- ☛ Designed a user-friendly spreadsheet calculator that shows a month-to-month profit comparison for one’s current rental situation against their desired home purchase and sold a copy to a local brokerage firm
- ☛ Optimized the accuracy of the calculator with knowledge of the home buying experience, principle, interest, escrow, loans, taxes, utilities, closing fees, insurance options, inspections, agent fees, etc.

Hydrodynamics of Dolphin Caudal Fins | Syracuse, NY

June 2015 – May 2016

- ☛ Studied the fluid dynamics and propulsive aspects of dolphin tails and experimented with 3D printed dolphin caudal fins that mimicked swimming motion inside a water tunnel
- ☛ Synthesized knowledge of MATLAB, Excel, SolidWorks (CAD), 3D printing, Arduino, planar laser-induced fluorescence, HD videography, aerodynamics, fluid dynamics, and electrical circuits
- ☛ Used fluorescent dye, highlighted with planar-shaped lasers, to outline trailing edge vortices, and created 3D vortex visualizations constructed on MATLAB using pixel data from the HD recordings of the 2D vortex sheets

Model Aircraft Competition | *First Place Winner* | Syracuse, NY

January 2016 – May 2016

- ☛ Engineered, built, and flew a six-foot model aircraft using a DC motor, balsa wood, and composites materials by using knowledge of aerodynamics, stability and control, electrical engineering, and 3D printing

WORK EXPERIENCE

Spirit AeroSystems, Inc. | *Aerospace Stress Engineer, Structural Analysis* | Wichita, KS

August 2016 – August 2020

- ☛ Worked on teams that designed, built, analyzed, and tested the fuselages for The Department of Defense, Boeing’s 787 Dreamliner, and Boeing’s 777X; gained promotion to Level II Stress Engineer within 18 months
- ☛ Applied knowledge of MATLAB, Excel, linear algebra, ABD matrices, statics, dynamics, fatigue, damage tolerance, crack growth, Finite Element Analysis, Computer-Aided-Design, and properties of aluminum and composite materials

Glacier’s Bed and Breakfast | *Airbnb Rentals - Super Host* | Wichita, KS

July 2018 – March 2020

- ☛ Purchased a 3-bedroom home and became a self-employed Super Host by sustaining a 5-star rating with over 80 bookings

EXTRACURRICULARS & CERTIFICATIONS

Secret Government Security Clearance | Private Pilot | Open Water Scuba Diver | Learn to Ice Skate Instructor
Varsity Ice Hockey Coach | Alternate Captain, Syracuse University Roller Hockey