RAFAEL SCHLEDER

COMPUTER ENGINEER
Undergraduate

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SKILLS

C++, Python, Java

Control Systems

Machine Learning

CAD Drafting

3D-printing

CNC Machining

CAD Logic Design

Git Version Control

Bash & Command Line

Experiment Design

Data Analysis

Web Development & SEO

Arduino

Build Systems

Verilog & FPGA testing

vscode, vim, IDEs

AWARDS

DEAN'S LIST
U of M, '18 - '19

UNIVERSITY HONORS
U of M, '18 - '19

MICHIGAN RESEARCH and **DISCOVERY SCHOLAR**
U of M, '18

CUM LAUDE
Cum Laude Society, '17

RESUME OBJECTIVE

Studying Computer Engineering, interested in Applied Math, Data Science, Interdisciplinary Research. Background in Control Systems, applied to Advanced Manufacturing and Autonomous Vehicles. Currently working on Machine Learning with Health Data. Plan to work in Entrepreneurship and Innovation with Early Stage Growth Companies.

EXPERIENCE

UNDERGRADUATE RESEARCHER

University of Michigan, Ann Arbor, MI / October '18 – May '19

Implemented advanced manufacturing in UM Geology Department Lab for diamond and light element experiments. Worked with lab equipment, measurement devices, and CNC, 3D printing machinery for production of deep earth replication assembly.

RESEARCH SCHOLAR

Air Force Research Laboratory, Albuquerque, NM / May '18 – August '18

Collaborative Autonomous Production Lab with University of New Mexico, under Space Vehicle Directorate, clearance required. Worked on advanced manufacturing control system and hybrid manufacturing implementation for satellite production.

TECHNICAL INTERN

Sandia National Laboratories, Albuquerque, NM / May '17 – November '17

Electromagnetic Theory Group, Developed internal website and database. Programmed in C++, Python, MATLAB, on electromagnetic simulations and data processing. Worked on applied electromagnetic experiments and material tests.

EDUCATION

B.S.E. COMPUTER ENGINEERING

University of Michigan, 2022 *GPA: 3.67/4.0*

Extracurriculars

Michigan Research Community (MRADS)	Hyperloop Controls Team
Finer Things Club	[CS]^2 volunteering

Relevant Coursework

EECS 281 – Data Structures and Algorithms	EECS 285 – Practical Programming in Java
EECS 201 – Computer Science Pragmatics	EECS 280 – Programming, Data Structures
EECS 270 – Intro to Logic design	EECS 203 – Discrete Mathematics
ENGR 100 – Intro to Autonomous Systems	MATH 214 – Applied Linear Algebra
MATH 216 – Intro to Differential Equations	MATH 425 – Intro to Probability

PROJECTS

NMDOH Machine Learning – Worked with the New Mexico Department of Health Emergency Medical Services Division, to implement machine learning on some of their existing regression models, text classification, and data searching.

Web Development – To build myself a personal website, I learned html, CSS and some JavaScript. Then contracted design work from local businesses in Albuquerque.

Social Determinants of Health ML Regression – Began as a project for my applied linear algebra class. Built an ANN from scratch in python. Implemented least squares cost function and numerical gradient approximation. Worked collaboratively with partner on the read-in and SVD for optimization.

Great Attractor Art Installation design – CAD Drafting was for an exhibit in the Naples Museum of Archeology, in Italy. Goal was to use motors to track this celestial body. Assisted with design and led CAD and engineering drawings.