

Dara Odukoya

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EDUCATION

Rice University

Jan 2026- Expected May 2029

B.A. Computer Science, Economics

TECHNICAL SKILLS

Programming Languages: Python, C, HTML/CSS, SQL

Frameworks and Development Tools: GitHub, Git, VS Code, Tableau, Microsoft Suite(Word, Excel, PowerPoint), Canvas LMS

PROFESSIONAL EXPERIENCE

Extern, IoT Cyber Defense(Hydroficient)

July 2026 - Present

- Built and defended a simulated IoT infrastructure for a hotel water management system, producing a STRIDE-based threat model that identified spoofing, tampering, DoS, and replay risks and delivered three prioritized mitigation recommendations
- Developed a Python sensor log generator and Colab notebooks to parse JSON telemetry, clean data with Pandas, and simulate IoT sensor behavior for security testing
- Executed simulated cyberattacks to uncover vulnerabilities and implemented corresponding defenses, collaborating with industry security professionals to strengthen system security posture

Rice Center for Engineering Leadership(RCEL) | *Rice Elite Tech Live Instructor*

June - July 2026

- Instructed two 4-week technical tracks of 30+ advanced high school students each: a deep learning course covering CNN architecture, image data representation (arrays, channels, normalization, train/test splits), and supervised/unsupervised learning, and a Python for Mechanical Engineering course modeling thermal energy transfer to predict safe food-consumption temperatures
- Guided student teams through building, training, and evaluating a convolutional neural network on the MNIST dataset, and led a separate project applying finite difference methods and NumPy array slicing to a 2D heat conduction simulation
- Taught students to interpret model predictions using accuracy and confidence rather than treating output as automatic truth, reinforcing critical evaluation of ML results

PROJECTS

QR Code Error Correction Engine

2026

- Implemented Reed-Solomon error correction for QR codes in Python using GF(256) finite field arithmetic, building an immutable Polynomial class with addition, subtraction, multiplication, and polynomial long division operations to generate error correction bytes from encoded message data

Stock Market Model

2026

- Implemented an nth-order Markov chain model in Python to predict daily stock price movements for GOOG, FSLR, and DJIA, achieving the lowest MSE of 0.80 on DJIA across 500 trials using two years of historical data
- Designed a modular prediction pipeline with separate modeling, weighted random choice, and error evaluation components

LEADERSHIP

Ambassador, Rice University Doerr Institute for New Leaders

2026

- Completed a semester of 1-on-1 professional coaching with an ICF-certified coach, identifying and developing key leadership competencies, including assertiveness and stress tolerance

ORGANIZATIONS

National Society of Black Engineers(NSBE), Society of Women Engineers(SWE), Rewriting the Code(RTC)