Ricky Jones

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Self-motivated engineer with several years experience in programming, CAD, electronics, and leadership. Seeking an internship for Summer 2025. Examples of personal projects and more are available on my website above.

Education
Virginia Commonwealth University, Honors College
Graduating May 2027
B.S. in Mechanical Engineering
Concentration in Nuclear Engineering
Minor in Aerospace Engineering
GPA: 3.8, Dean's List since Fall 2023

Relevant Courses
Thermodynamics (EGMN 204)
Fluid Mechanics (EGMN 301)
Material Science (EGMN 309)
Project Management (SCMA 350)
Mechanics of Deformables (EGMN 202)
CAE Design (EGMN 420)

Computer skills: Solidworks, MATLAB, Microsoft Excel, Adobe Creative Cloud
Technical skills: Experienced with power tools, 3D design and printing, wafer photolithography, metallization, etching, and deposition, technical writing and research, effective communication and leadership.
Programming languages: Java, JavaScript, Python, HTML/CSS, C++, Visual Basic.
Certifications: MATLAB Fundamentals (MathWorks)

Relevant Work Experience

Virginia Microelectronics Center — **Undergraduate Research Intern**, Richmond, VA (Oct 2023 - *Present*)
- Maintained and helped to grow a Class 1000 clean room used for postdoctoral research, labs, and more. Ordered and supplied chemical and protocol inventory to users, coordinated bulk laundry shipments and lab maintenance, and assisted with installation of new equipment.
- Actively involved in research into developing a near-infrared photodiode sensor array on a germanium wafer. Trained on a wide array of wafer fabrication equipment, including photolithography, electron-beam deposition and metallization, chemical and plasma etching, and topological analysis.

Jefferson Lab Particle Accelerator — **Engineering Intern**, Newport News, VA (Jun 2022 - Jul 2022)
- Analyzed control diagrams from the low-conductivity water system and cooling towers serving the particle accelerator as well as their sensors. Compared historic and modern maintenance data to determine critical failure points and develop criteria for implementing a predictive maintenance model.
- Performed analysis of low-conductivity water systems found at other particle accelerator facilities and commercial projects to determine historical points of failure to factor into analysis, working alongside a mentoring systems engineer to develop a more comprehensive model for failure prediction.

Student Organizations

Hyperlabs at VCU
Mechanical Team Member, Aug 2023 - Present
- Designed vehicle chassis in Solidworks to determine project cost and material selection.
- Integrated sensor and navigation systems to form a vehicle capable of autonomous navigation. Led several design meetings with subteams.

Technology-Student Association at Clover Hill HS
President, Sep 2021 - Jun 2022
- Founded and led local TSA chapter, serving as club president and event organizer.
- Organized meetings and coordinated with school faculty for fundraising and events.
- Assisted students with planning personal engineering projects.

Projects and Research

Germanium Photodiode Project — Virginia Microelectronics Center, VCU (Jun 2023 - Present)
- Developing a pinned photodiode FET for near-infrared detection and imaging based on a germanium substrate, working under Dr. Nibir Dhar. Currently developing a recipe for surface passivation to ensure effective device performance as well as developing an effective dry-etch process.

Additional Work Experience

Mission Barbeque (BBQ) — **Cashier and Food Prep**, Midlothian, VA (Jul 2022 - Aug 2023)
- Handled orders, processed payments, and maintained quality standards under pressure.
- Responsible for training several new employees across multiple roles.