Ricky Jones

Richmond, Virginia • jonesr30@vcu.edu • (804) 814-9516
https://www.linkedin.com/in/rickyjones30/ • https://www.ricky-jones.com/

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

Education
Virginia Commonwealth University, Honors College
Graduating May 2027 (Sophomore)
B.S. Mechanical Engineering,
Concentration in Nuclear Engineering
Minor in Aerospace Engineering
GPA: 3.8 / 4.0, Dean's List since Fall 2023

Relevant Courses
Heat Transfer (EGMN 302)
Fluid Mechanics (EGMN 301)
Material Science (EGMN 309)
Project Management (SCMA 350)
Deformables (EGMN 202)
CAE Design (EGMN 420)

Computer skills: SolidWorks, AutoCAD, Blender, Unity/UE5, MATLAB, PC1D, Synopsys, Microsoft Excel.
Technical skills: Experienced with power tools, additive manufacturing, microelectronics fabrication, LaTeX, laser cutting, effective communication, and leadership.
Programming languages: Java, JavaScript, Python, HTML/CSS, C++, Visual Basic.
Certifications: MATLAB Fundamentals (MathWorks).

Relevant Work Experience

Undergraduate Research Intern — Virginia Microelectronics Center, Richmond, VA (Oct 2023 - *Present*)
- Expanded and helped to revitalize an ISO-6 clean room used for postdoctoral research, labs, and more.
- Responsible for training users on equipment, communicating with vendors and directing procurements, coordinating lab maintenance, hazardous waste disposal, and assisting with the installation and maintenance of microfabrication equipment.
- Secured $26,000 in funding for the lab to procure a tool vital to ongoing research. Handled the procurement, installation, and validation of the tool, and trained other users and staff on its operation.
- Fabricated patterned wafers using a variety of microfabrication equipment, including spin-coat photolithography, electron-beam deposition, metallization, plasma etching, and topological analysis.

Engineering Intern — Jefferson Lab Particle Accelerator, Newport News, VA (Jun 2022 - Jul 2022)
- Redesigned the parameters and criteria to be monitored for the low-conductivity water and cooling tower systems serving the particle accelerator to provide early predictions of failure of key systems.
- Implemented historic and modern maintenance data to determine critical failure points and develop criteria to inform a predictive maintenance model developed in conjunction with Honeywell.
- Analyzed maintenance systems from other particle accelerator facilities and commercial projects to determine factors of failure to include in analysis, working alongside a mentor to develop a more comprehensive model for failure prediction.

Student Organizations

Hyperlabs (Formerly Hyperloop) at VCU
Mechanical Team Member, Aug 2023 - May 2024
- Designed vehicle chassis in Solidworks to determine project cost and material selection.
- Lead design meetings to integrate sensor and navigation systems to assemble an autonomous vehicle for the Intelligent Ground Vehicles Competition.

Ram Rocketry at VCU
L1 Candidate, December 2024 - *Present*
- Designing and building a rocket for Tripoli Rocketry Association L1 certification.

Technology-Student Association at Clover Hill HS
President, September 2021 - May 2023
- Founded TSA chapter and assisted students with personal projects, and led meetings.
- Secured club sponsorship for project funding.

Research Projects

Novel Mid-Wave Infrared FET on Ge — Convergence Lab Institute (CLI), Richmond, VA (Jun 2023 - *Present*)
- Developing a mid-wave infrared pinned photodiode on a germanium substrate, working under Dr. Nibir Dhar at the VMC. Currently developing a dual-layer surface passivation recipe to enable effective and noise-free device performance.
- Developing on Ge to move away from traditional, costly HgCdTe substrates and cut price significantly.

Additional Work Experience

Mission Barbeque (BBQ) — **Cashier and Food Prep**, Midlothian, VA (Jul 2022 - Aug 2023)
- Handled orders, processed payments, and trained several new employees across multiple roles.