Riyos Pudasaini

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Education — Expected Graduation

Virginia Tech, Master of Science — **May 2025**
- Program: Computer Science and Applications
- Focus Area: High Performance Computing

Virginia Tech, Bachelor of Science — **May 2024**
- Major: Computer Science | GPA: 3.73
- Minor: Mathematics

Technical Skills

Languages

C/C++, Java, Python, Rust, R Studio, HTML, CSS, Java Script, Bash/Zsh Shell Scripting

Software

Eclipse IDE, Visual Studio Code, Github/GitLab, Exel, SLURM, LaTex, Mask R-CNN, Jupyter Notebook, Anaconda, Vim/Neovim, VGG image annotator

Skillset

Systems Programming, Software Design/Engineering, Object Detection with Machine Learning Libraries, High Performance Computing Research

Experiences

Residential Well-Being Student Leader, Virginia Tech — **August 2023 - Present**
- Coordinate information, schedule meetings, and share essential resources with Virginia Tech students
- Work in teams with other Student Leaders to facilitate move-in's and act during sensitive situations
- Discuss strategies, community trends, and circumstances with professional-staff in weekly meetings

Research Intern, iACT Lab, Virginia Tech — **May 2023 - July 2023**
- Participated in a hands-on research project in the Intelligent Automation and Control Technologies lab at Virginia Tech.
- Developed and Trained an object-detection model, using the Mask-RCNN and Detectron2 libraries, to identify clusters of fruit on an Institute-Owned orchard. Model met industry standards with 91% accuracy
- Investigated methods to embed the detection model onto a robot for intelligent crop harvesting.
- Presented findings to the Summer 2023 Research Conference

Researcher, PEARL Lab, Virginia Tech — **April 2023 - Present**
- Investigated various memory management protocols and techniques implemented by Open Source projects
- Conducted literature review sessions in High Performance Computing and Systems Software
- Implemented multi-threaded programs designed to overwhelm memory allocators and scrutinize potential security vulnerabilities and optimizations for their runtime routines

CS Squared, Virginia Tech — **March 2023 - Present**
- Manage a team of 12 volunteers to organize a semester-wide coding-club with the Blacksburg Regional Library that teaches young, elementary grade students, the basics of programming
- Coordinate appointments and meetings with librarians and elementary school faculty to facilitate advertising for the event
- Create multiple, semester-wide lesson-plans through the Tynker Learning platform, and the scratch programming interface.
- Current planning and implementation of the club has totaled over 50 hours of community service