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| **IAN C. KRUGER** | krugerianc@gmail.com  (803)-386-4999  ianckruger.github.io | | | |  | |  | | |
| **EDUCATION** | | | | | |  | |  |  | |
| **University of South Carolina** – Columbia, SC  **College of Engineering and Computing** | | | December 2025 | | |  | |  |  | |
| *Bachelor of Science in Computer Science* GPA: 3.91  **Relevant Coursework**: Advanced Programming Techniques, Software Engineering, Algorithmic Design II, Applied Linear Algebra, Discrete Mathematics, UNIX/LINUX Fundamentals, Web Design, Digital Logic Design | | | | | |  | |  |  | |
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| **EXPERIENCE** | | | | | |  | |  |  | |
| **CEC at University of South Carolina** – Columbia, SC | | September 2023 - Now | | | | | | | | | |
| *Undergraduate Research Assistant and Developer*   * Optimized our preprocessing object detection pipeline's efficiency by 20% and increased the accuracy of Meta's Segment-Anything-Model through canny edge detection by 46% by leveraging a dual language approach to implement various edge thinning and calculation techniques through angle measurement and non-maximal suppression. * Oversaw the end-to-end development of the post-processing pipeline to ensure seamless integration with existing systems. | | | | | |
| **Magnolia Metrics, LLC**– Chapel Hill, NC | | Feb 2023 - Now | | | |  | |  |  | |
| *Software Engineer, Co-founder* | | | | | |  | |  |  | |
| * Co-founded a software company partnered with the Town of Chapel Hill, Town of Cary, and NCDOT focused on developing innovative adaptive technology for traffic management. * Built an intersection simulation that utilizes real time data to develop and apply back-end asynchronous optimization algorithms for traffic lights, reducing traffic congestion and CO2 emissions by 23% in performing streets. * Increased back-end program efficiency by 56%, optimizing and connecting a Mask R-CNN ML Model to our asynchronous algorithm that utilizes object detection to quantify various vehicles and pedestrians accurately and efficiently for real-time data usage.   **Launch Chapel Hill -** Chapel Hill, NC June 2023 – August 2023 *Summer Intern*   * Founded and grew an intelligent transportation managements system business that focused on the development of smart traffic technology in areas throughout North Carolina. * Connected with various field leaders across municipalities, investor boards, and CEOs of rival tech companies to cement our name in the industry and ensure the continuation and enhancement of our technology and services. | | | | | |  | |  |  | |
| **TECHNICAL SKILLS** | | | | | |  | |  |  | |
| **Programming Languages***: Python, Java, C++, MATLAB*  **Web Development***: HTML, CSS, SCSS, JavaScript, JSON*  **Tools and Technology***: Git, UNIX/LINUX, Data Structures and Algorithms, TensorFlow, PyTorch, OpenCV* | | | | | |  | |  |  | |
| **CERTIFICATIONS** | | | | | |
| **Uncontrolled Classified Information Handling**  **Cybersecurity and Insider Threat Awareness**  **CITI Export Compliance** | | | |  | |