Julian Krese

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EDUCATION

University of Virginia   Charlottesville, Virginia
Bachelor of Arts in Computer Science, Minor in Data Science, GPA: 3.954   *May 2026*
Coursework: Algorithms, Compilers, Computer Architecture, Computer Networks, Data Structures, Machine Learning, Operating Systems, Software Development

EXPERIENCE

Climate Restoration Initiative - Environmental Institute (UVA)   Charlottesville, Virginia
Software Tool Developer   *July 2024 - Present*
- Collaborating with 5 schools at UVA to find economically profitable and sustainable solutions for carbon removal in the commonwealth of Virginia by looking into key geographic features on a county by county basis.
- Displaying and modifying GeoJSON files and data through Django and PostgreSQL for analysis.

Karpool   Cape Town, South Africa
Fullstack Software Engineering Intern   *May 2024 - June 2024*
- Built and integrated the payment system for a ride-sharing React-Native app with the Paystack API.
- Enhanced the user interface by implementing the latest Figma-based design updates.

IXperience   Cape Town, South Africa
Software Engineering Student   *May 2024 - June 2024*
- Completed a 6 week software bootcamp taught by industry experts with an emphasis on full stack development.
- Learned industry standard tools and skills including but not limited to Bootstrap, React, and Node.

Department of Computer Science (UVA)   Charlottesville, Virginia
Undergraduate Teaching Assistant for CS 3100   *January 2024 - Present*
- Providing help as a Teaching Assistant for Data Structures and Algorithms 2 taught in Python and Java.
- Assisting with students' understanding of key concepts with an emphasis on algorithms related to Graphs, Divide and Conquer, Greedy, Dynamic Programming, Network Flow, and Machine Learning.

Undergraduate Teaching Assistant for CS 2100   *August 2023 - Present*
- Working as a Teaching Assistant for Data Structures and Algorithms 1 taught in Java.
- Assessing and sharpening students' understanding and ability to implement and use data structures (i.e. trees, heaps, hash maps, etc.) and beginner algorithms (sorting).

PROJECTS

Blog - *MongoDB, Express, React, Node, Bootstrap*   May - June 2024
- Developed a MERN blog application that allows users to read and create blogs under authenticated accounts.
- Designed and implemented a comprehensive user interface featuring a secure login and registration page with JWT authentication, home page, categories page, author page, profile page, and blogs page.
- Used Google Cloud Buckets for secure storage.

Course Enrollment - *Java, JavaFX, SQLite*   May 2024
- Developed a CRUD application that allowed students to see and leave reviews for courses.
- Sections include a login, course search, user-specific reviews, and course-specific reviews.

Virtual Memory Allocation - *C*   March 2024
- Simulated OS assignment of physical memory to virtual memory
- Allocated and translated memory into multi-leveled page tables, with a configurable number of levels and size.

SKILLS & ACTIVITIES

Languages: C, C++, CSS, HTML, Java, JavaScript, Python, R, Unix
Libraries, Frameworks, and Other: Bootstrap, Express, Git, Keras, MongoDB, Node.js, NumPy, Pandas, React, SciKit-Learn, SQLite, Django, Azure, Google Cloud Platform, Web Development, Mobile App Development
Activities and Hobbies: Fly Fishing, Fly Tying, Golf, Hiking, Soccer, German