

Samuel Audia

Scientific Computing Software Engineer

Profile

Skilled, self-motivated software engineer seeking leadership position which will allow me to build an innovative and collaborative team focused on high performance physics simulations

Education

University of Maryland, College Park

May, 2020 | GPA: 3.98/4.0

- B.S. Mechanical Engineering, Summa Cum Laude
 - B.S. Computer Science, Summa Cum Laude
- Banneker/Key Merit Scholarship

Expected May, 2028 | GPA: 4.0/4.0

- Ph.D. Computer Science

Johns Hopkins University, Baltimore

December, 2022 | GPA: 4.0/4.0

- M.S. Applied and Computational Mathematics, with Honors

Professional Experience

Johns Hopkins Applied Physics Lab Laurel, MD (May, 2018 - Present)

Software Lead (October, 2021 - Present)

- Lead four person development team using agile methodologies to build multiple, performant physics simulations enabling innovative and high throughput analysis
- Mentored interns and junior full time staff in computational electromagnetics, C++, and modern software methodologies to build tools that typically require a senior team
- Strengthened hiring practices from intern to senior roles allowing teams to better screen and evaluate software engineering skill sets through rigorous technical review and incorporating more software leads in the interview process
- Trained in critical communication skills and attended leadership workshop to improve communication and mentorship with team
- Developed and communicated software architecture and design to both the software engineering and analysis teams allowing for better knowledge sharing and collaboration
- Managed multiple linux servers enabling modern software development practices such as continuous integration and delivery
- Built and maintained novel software defined radio testbed lowering costs and technical barriers of entry for rapid prototyping of novel radar and communications algorithms
- Influenced software engineering strategy in 2000 person sector through highly visible software engineering working group and continuously briefing leadership

Associate Staff (July, 2020 - October, 2021)

- Implemented complex numerical physics method in existing GPGPU accelerated simulation to address long standing numerical issue
- Self taught graduate computational electromagnetics theory and methods to quickly provide meaningful contributions to the team
- Interviewed over 40 software engineering leads to establish standards and best practices
- Founded software community of practice to improve software knowledge and quality

Intern (May, 2018 - July, 2020)

- Implemented workflows, scripts, and plugins for large scale CAD model creation enabling unprecedented monte carlo analysis
- Established CAD model creation process of human bodies for novel analysis

Contact

(410) 707-8761

Columbia, MD

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Skills

Programming

- C++
- C
- Java
- Python
- Julia
- Lua
- HTML/CSS
- Matlab
- Rust

CAD | Modeling

- Creo Parametric
- SolidWorks
- Autodesk Inventor
- CADFEKO
- Blender

Software

- GitLab
- Jira
- Confluence
- Artifactory
- Microsoft Office
- Microsoft Excel
- Microsoft PowerPoint
- Linux