JELANI GIVENS II

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PHYSICIST | DATA SCIENTIST | SOFTWARE ENGINEER | QUANTITATIVE RESEARCHER
RESEARCH | DATA SCIENCE | SOFTWARE DEVELOPMENT | DATA ANALYTICS

Analytical Problem solver with a passion to learn, discover, and innovate.
Aspiring to Inspire and lead others while being inspired every day.

Physicist, scientist, and engineer with experience in data analysis, laboratory testing, automation, and software development. Skilled in Python, C++, C#, SQL, and modern web technologies. Strong foundation in theoretical & experimental physics, quantitative modeling, and computational problem-solving. Adept at designing experiments, analyzing large datasets, and building tools that integrate scientific reasoning with software engineering. Seeking roles in quantitative research, data science, or applied analytics.

EDUCATION
Master's in Science (MS), Physics, California State University – Los Angeles, Los Angeles, California
Bachelor of Arts (BA), Physics, Knox College, Galesburg, Illinois

TECHNICAL SKILLS

CODING LANGUAGES:	JAVA, UNIX, PYTHON, C#, C++, JAVASCRIPT, HTML, CSS
FRAMEWORK/API:	ASP.NET, REACTJS, THREE JS, SASS, TAILWIND CSS, JUCE Framework, SCRAPY WEB SCRAPING, PLAYWRIGHT AUTOMATION
SOFTWARE:	MICROSOFT OFFICE, SPYDER IDE, ANACONDA, POWERSHELL, MATHEMATICA, VS CODE, LaTeX, POWER Tools, Microsoft SQL Server Management Studio
CORE COMPETENCIES:	Data analysis, Automation, Modeling, Algorithm Design, Experimental Methods, Scientific Computing

PROFESSIONAL EXPERIENCE
ECOLAB Inc., Joliet, Illinois
Quality Lab Technician **May 2025 to November 2025**
I played a vital role in maintaining quality standards as a Laboratory Technician at Ecolab.
- Performed analytical testing including HPLC, GC, UV/Vis, and AA spectroscopy to ensure product reliability.
- Conducted sample collection, external testing coordination, and investigative analyses for quality assurance.
- Automated workflows using Playwright Python scripting, Excel macros, Power BI dashboards, and Power Automate flows.
- Supported engineering and quality teams through structured data reporting and trend analysis.

Malcolm X College – City Colleges of Chicago, Chicago, Illinois
Adjunct Professor – Math | Physics **August 2023 to Present**
In this role, I am a part-time lecturer who has taught math courses ranging from developmental math to Calculus and introductory algebra-based physics courses.

- Taught mathematics (developmental through Calculus) and algebra-based physics courses.
- Communicated complex quantitative concepts through simplified, foundational explanations.
- Designed and demonstrated introductory physics labs to reinforce theoretical understanding.
- Supported student learning through problem-solving guidance and conceptual breakdowns.

Stratasys Inc., Elgin, Illinois
R&D Lab Technician **August 2023 to May 2024**
In this role, my main roles were to run various data collection tests on different polymeric networks, while also managing both the lab supply and chemical inventory systems.

- Conducted data-driven testing on polymeric materials using DLP/SLA 3D printing, UV/thermal curing, and rheological analysis.
- Performed viscosity, FTIR, DMA, tensile, impact, and HDT testing to characterize material behavior.
- Analyzed mechanical and thermal data to support development of new polymer network designs.
- Managed chemical inventory, documentation, SDS/COA archiving, and global reporting for R&D teams.
- Collaborated with international colleagues to share findings and support cross-site research initiatives.

RESEARCH EXPERIENCE

MASTER'S THESIS - "THE HOLOGRAPHIC REGULARIZATION FOR ADS2 AND CONFORMAL WEYL GRAVITY"
RESEARCH MENTORS: DR. LEO RODRIGUEZ (GRINNELL COLLEGE)

- Investigated gravitational solutions satisfying both Conformal Weyl Gravity and Einstein Field Equations.
- Applied holographic regularization techniques to compute boundary stress-energy tensors.
- Analyzed gravitational lensing and geodesic behavior to compare predictions across formalisms.

"ENCRYPTED DATA COMMUNICATION THROUGH POLARIZATION"
RESEARCH MENTOR: DR. DAVID VAN BUREN (CALIFORNIA STATE UNIVERSITY – LOS ANGELES| NASA JPL)

- Built a polarization-based Binary-code communication system using a He-Ne laser and automated polarizer rotation.
- Programmed an 8-bit binary-controlled rotation device and analyzed photodiode sensor outputs.
- Demonstrated optical communication principles through polarization-encoded signal transmission.

"ON THE CONFORMAL FLATNESS OF THE WEYL-RODRIGUEZ BLACK HOLE AS A PERFECT FLUID"
RESEARCH MENTORS: DR. LEO RODRIGUEZ (GRINNELL COLLEGE)

- Investigated conformal transformations mapping gravitational solutions to flat spacetime.
- Analyzed fluid parameters and classical Weyl invariance in Conformal Weyl Gravity.
- Compared action integrals between Weyl Gravity and General Relativity.

PRESENTATION EXPERIENCE

"ON THE CONFORMAL FLATNESS OF THE WEYL-RODRIGUEZ BLACK HOLE AS A PERFECT FLUID"
2019 Midwest McNair Scholars Research Conference at Kent State University

"ON THE CONFORMAL FLATNESS OF THE WEYL-RODRIGUEZ BLACK HOLE AS A PERFECT FLUID"
2019 Sigma Pi Sigma Physics Congress in Providence, Rhode Island

ADDITIONAL RELEVANT EXPERIENCE

- **Cal State LA, Physics and Astronomy Club – Chairman of Public Relations**
- **Knox College, Ronald E. McNair Scholars Program – Research Mentor**
- **Knox College, Inter-Fraternity Council – Vice President of Community Relations**
- **Knox College, Inter-Fraternity Council – Vice President of Recruitment**
- **Knox College, Allied Blacks for Liberty and Equality – Treasurer**

INDEPENDENT PROJECTS

Co-Op Social Media Website – ASP.NET, ReactJS, SQL Server (Ongoing)

- Full-stack gaming-focused social platform integrating community features and live-streaming capabilities.
- Designed backend APIs, database schema, and responsive UI components.

Musical Production Automated MIDI Generator – C++, JUCE Framework (Ongoing)

- Algorithmic melody generator using controlled randomness, scale constraints, and MIDI export.
- Designed rhythm-density mapping, interval-bias logic, and trap-style phrasing rules.