

Alani Jenkins

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📍 Birmingham, AL 35203

SUMMARY

Dedicated environmental engineer with a degree in Environmental Engineering, fueled by a passion for water resource management. Hands-on experience from academic projects and internships showcases robust skills in hydrologic modeling and computer model development. Prepared for operational challenges and eager to contribute to AquaTech Solutions' goals in watershed management and sustainable practices. Strong collaborator equipped with practical know-how in creating solutions that ensure effective flood control and drought management strategies, elevating overall system efficiency.

EXPERIENCE

Water Resources Intern January 2026 - Present
University Research Lab *Birmingham, AL*

- As a water resources intern, focused on improving flood risk assessment and watershed modeling. This role involved hands-on support for software tools and real-time data applications in environmental engineering.
- Collaborated on developing a hydrologic model for local watersheds using MATLAB and GIS.
 - Assisted in configuring real-time monitoring systems, significantly enhancing data accuracy for flood forecasts.
 - Supported implementation of watershed control plans by analyzing data from sensors and gaging systems.
 - Participated in remote support during severe weather, ensuring timely operational updates.
 - Conducted hydraulic modeling to analyze impacts of drought management strategies.
 - Performed Python programming to automate data collection processes, increasing research productivity.

Hydraulic Modeling Developer September 2025 - December 2025
Capstone Project *Birmingham, AL*

- Led an academic team in developing a comprehensive watershed model, integrating real-time data for sustainable water management solutions.
- Utilized river analysis software to simulate various scenarios and assess flood control effectiveness.
 - Developed detailed documentation and presented findings, emphasizing insights to faculty and industry stakeholders.
 - Engaged extensively in peer reviews to refine models, ensuring adherence to best practices.
 - Designed user-friendly interfaces for effective data visualization, supporting stakeholder decisions.
 - Coordinated project roles efficiently, promoting teamwork and understanding among group members.

Research Assistant January 2025 - May 2025
Academic Research *Birmingham, AL*

- Assisted in significant research focusing on climate change impacts on water resources while ensuring regulatory compliance and data integrity.
- Supported data collection and dissemination, maintaining compliance with environmental standards.
 - Deeply involved in discussions with faculty and experts, enhancing project scope.
 - Developed automation scripting to boost data analysis, facilitating more accurate outcomes.
 - Participated in academic conference presentations to share research methodologies and findings.
 - Conducted literature reviews that shaped subsequent research directions effectively.

LEADERSHIP & AWARDS

- Dean's List, University of Alabama – 2024
- Recipient of the Engineering Excellence Scholarship – 2025

EDUCATION

Bachelor of Science in Environmental Engineering 2026
University of Alabama GPA: 3.85 *Tuscaloosa, AL*
Coursework: Hydrology, Water Quality, Environmental Regulations, Fluid Mechanics

CERTIFICATIONS

- Certified in Water Resource Management 📅 2026
- Fundamentals of Engineering (FE) Exam 📅 2026

TECHNICAL SKILLS

- **Modeling Software:** Hec-Ras, SWMM, MODFLOW

- **Data Visualization Tools:** Tableau, Power BI, ArcGIS
- **Scripting Languages:** Python, R, JavaScript
- **Monitoring Systems:** Hydro Optimization Management System, Gaging Networks, SCADA
- **Database Management:** SQL Server, PostgreSQL, Oracle
- **Statistical Analysis:** SPSS, SAS, Excel
- **Communication Tools:** Microsoft Teams, Slack, Zoom
- **Network Systems:** LAN, WAN, IoT Sensors
- **Data Processing Frameworks:** Pandas, NumPy, Dask
- **Geospatial Technologies:** QGIS, ESRI ArcMap, GPS Tracking

SKILLS

- Hydrologic Modeling
- MATLAB
- Data Analysis
- Watershed Management
- Python
- GIS
- Programming
- Real-time Monitoring

PROFESSIONAL AFFILIATIONS

- Member of the Environmental Engineering Society, University of Alabama
- Volunteer engaging in local water conservation programs

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST