

Prasanna Rajbhandari

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Pursuing a major in Information Systems and Business Analytics at Arkansas State University, with hands on experience in data analysis, image processing, and big data management. Experienced in applying analytical techniques to solve complex problems to derive actionable insights and optimize business processes.

Work Experience

Intern, Arkansas Biosciences Institute

May 2024 – September 2024

State University, AR

- development and implementation of image processing algorithms for analyzing big data related to plant disease detection with an overall 91.90% accuracy rate.
- Analyze image data using software tools and machine learning techniques to detect diseases in four different plant categories.
- used big data visualization, machine learning, and deep learning to analyze Black Sigatoka in bananas and Pathogen–Host Interactions (PHI) in plant diseases. It identified key correlations between environmental factors like canopy temperature and humidity. Tools like Tableau and JMP Pro highlighted disease trends, pathogen impacts, and spore morphotypes, aiding plant disease management.

Executive Committee Member, Nepalese Student Association

March 2024 – Present

State University, AR

- Coordination of cultural, social, and instructional activities to advance Nepalese culture and assist over 400 fellow students on university grounds.
- Engagement of membership involvement, event planning, and serving as a middleman between the NSA, the university, and outside groups.

Food Service Associate, Sodexo

January 2023 – Present

State University, AR

- Oversaw daily food service operations to guarantee timely service and food safety and to create a good dining environment.
 - Resolved issues and supported team efforts by working with staff members as a key point of contact between clients and management.
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Skills and Relevant Coursework

- Conducted summer research at the Arkansas Bioscience Institute, utilizing machine learning algorithms like GoogleNet and AlexNet to classify plant diseases with high accuracy through image processing and structured train-test data.
 - Developed skills in Python through hands-on projects in Programming Fundamentals and Mobile App Development, creating interactive applications and user-friendly interfaces.
 - Proficient in data visualization tools such as Tableau and Power BI, producing insightful dashboards and analytical reports to support data-driven decision-making.
 - Proficient in JMP Pro, leveraging advanced statistical analysis and predictive modeling to uncover data patterns and enhance decision-making.
 - Strong oral and written communication skills, with proven flexibility and adaptability in multicultural team environments.
 - Developed leadership skills as an executive member of the Nepalese Student Association at Arkansas State University, coordinating events, fostering community engagement, and supporting international student's needs.
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Education

Bachelor of Science, Information System and Business Analytics (ISBA)

Graduation Year - 2026

Arkansas State University - Jonesboro, AR

- Junior at A-State with primary focus on mastering data management and analytics techniques, alongside learning to implement technology solutions that streamline business processes. Engaged in hands-on projects and coursework designed to build expertise in data handling, analysis, and strategic decision-making in business environments.

Volunteering

Mentor, Neil Griffin College of Business

November 2024

State University, AR

- First Year Experience (FYE) Program – Provided guidance and educational support to first-year students majoring in Information Systems and Business Analytics, helping them navigate academic challenges and develop foundational skills for success.

Publications

Image Processing of Big Data for Plant Diseases of Four Different Plant Categories: Represented by Rice, Banana, Sunflower, and Potato

Segall, Richard S., and Prasanna Rajbhandari. "Image Processing of Big Data for Plant Diseases of Four Different Plant Categories: Represented by Rice, Banana, Sunflower, and Potato." IJCVIP vol.14, no.1 2024: pp.1-32.

<http://doi.org/10.4018/IJCVIP.353913>

Big Data Visualization for Black Sigatoka Disease of Bananas and Pathogen–Host Interactions (PHI) of Other Plants

Segall, Richard S., et al. "Big Data Visualization for Black Sigatoka Disease of Bananas and Pathogen–Host Interactions (PHI) of Other Plants." IJARB vol.13, no.1 2024: pp.1-22.

<https://doi.org/10.4018/IJARB.361940>

References

Dr. Richard Segall

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Neil Griffin College of Business

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