

# ARK DUTT

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## EDUCATION

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### University of Wisconsin-Madison

May 2025

Bachelor of Science in Computer Science and Data Science | Minor in Economic Analytics

**Relevant Coursework:** Data Structures and Algorithms, Computer Architecture, Machine Organization and Programming, Data Science Programming, Linear Algebra, Discrete Mathematics, Parallel & Throughput programming

## SKILLS

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- **Programming Languages:** Java, Python, R, C, SQL, C#, HTML, CSS, JavaScript, SQL, Swift
- **Libraries/Frameworks:** Pandas, NumPy, Flask, Keras, TensorFlow, Tailwind CSS, Next.js, React.js, Angular.js, .NET
- **Tools:** Docker, Kubernetes, Jira, GitHub, Slacks
- **Certifications:** AWS Certified Cloud Practitioner, Machine Learning Specialization by DeepLearning.AI

## WORK EXPERIENCE

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### Machine Learning Researcher

Sep 2024 – Present

Informatics Skunkworks - Madison, WI

- Conducted machine learning research on renal cell carcinoma CT images, improving tumor classification accuracy.
- Developed convolutional neural network models to segment 160+ RCC tumors, enhancing clinical decision-making.
- Optimized CT scan feature extraction, boosting data pipeline efficiency and model performance.

### Software Developer

Feb 2024 – Present

Wisconsin Center for Education Research - Madison, WI

- Contributed to the enhancement of an educational technology platform as part of an Agile team of 6, leveraging C#/.NET, SQL Server, and AngularJS, resulting in improved platform functionality and user experience.
- Developed an automated scoring report system for 50+ science tests by integrating a new database, improving data processing efficiency, and reducing manual reporting time.
- Collaborated effectively with a diverse group of stakeholders, including developers, designers, and educational researchers, to accurately capture and implement project requirements.

### Software Engineering Intern

May 2023 – Aug 2023

TrustedNation - Chicago, IL

- Spearheaded the development of backend and frontend components for the corporate website, ensuring a seamless and efficient user experience.
- Restructured the frontend website using Next.js, modernizing the interface and improving maintainability.
- Optimized rendering performance by 25% through Next.js migration, server-side rendering, and code-splitting.

### Student Technology Trainer

Nov 2022 – Jan 2024

Software Training for Students - Madison, WI

- Led 70+ workshops and individual sessions focused on educating students in Data Science and Web Development technologies like Python, R, HTML, CSS, and JavaScript.
- Achieved an instructor rating of 4.80/5, reflecting the high-quality workshops and sessions conducted.
- Created and refined STS workshop manuals, which resulted in a 75% improvement in student mastery rates.

## SELECTED PROJECTS

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### [SpeakStudy](#)

[Headstarter AI Hackathon Finalist]

- Developed an AI-powered website that lets users ask doubts about lecture notes via a microphone, with real-time voice responses.
- Built using React, Material UI, Node.js/Express, and IBM Watson's Speech-to-Text and Text-to-Speech APIs.
- Enhanced learning accessibility by providing an interactive tool for auditory learning and AI-powered support.