Aarya Pathak

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Education

- **Bachelor of Science in Computer Science**, Kathmandu University, Dhulikhel
  Expected Graduation: 2027

Certifications

- **Complete AI & Machine Learning, Data Science Bootcamp**, Udemy

- **Machine Learning Specialization**, Coursera (Stanford University)

- **5th Annual Nepal AI School**, NAAMII

Skills

Programming Languages: R, C/C++, Python, HTML/CSS, JavaScript
Tools and Frameworks: Git, GitHub, NumPy, Pandas, Matplotlib, TensorFlow, Keras, Vue.js
Soft Skills: Strong communication and interpersonal skills, Teamwork, Problem-solving, Quick learner

Experience

Operations Lead, *Kathmandu University Research and Collaboration Hub (KURCH)*

- Facilitated smooth communication between professors and students to bridge the gap in research and scientific exploration initiatives.

- Paired students with expert professors based on their research interests and academic needs.

- Organized workshops on research methodologies and publication processes, inviting Nepal's top scientists to mentor university students.

Junior Developer, *AIPlans.com*

- Developed and maintained frontend features using Vue.js for an AI-driven platform.

- Collaborated with backend developers to integrate APIs and enhance system functionality.

- Worked with the design team to create responsive, user-friendly interfaces.

Research Intern, *Cognitive and Psycholinguistics Lab, Central Department of Linguistics, Tribhuvan University*

- Supported research projects in cognitive science and psycholinguistics through data analysis and literature reviews.

- Utilized Python and related tools (NumPy, Pandas) for processing and interpreting research data.

- Collaborated with interdisciplinary teams to execute research tasks efficiently.

Social Media Manager, *Sagravia, a US-based newsletter company*

- Managed social media campaigns and engagement for 3 months.

- Designed content strategies to increase newsletter readership and online presence.

Projects

Netra.ai *(GitHub)*

- Developed an AI-powered web application using transfer learning to detect eye diseases from fundus photographs.

- Combined pre-trained CNN models (ResNet50 and ResNet152) to improve diagnostic performance.

Chess Engine *(Github)*

- Built an AI-driven chess engine using the Negamax algorithm with Alpha-Beta pruning for efficient move evaluation.

- Implemented a scoring system balancing piece value and positional strategy, with dynamic game state analysis (e.g., checkmate, castling).

- Designed to explore moves up to a depth of 3, optimizing tactical and positional decision-making.

Additional Skills

- Strong social and teamwork skills

- Excellent problem-solving abilities

- Passion for continuous growth and development

References

Available upon request.