

# ROJAN ADHIKARI

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## ACADEMIC QUALIFICATION

**Master of Science in Computational Science – Computer Science**, University of Central Oklahoma (UCO), Edmond, Oklahoma, USA. GPA: 3.85 **May'25**

**Bachelor's in Computer Engineering**, Kathmandu Engineering College (KEC), Kalimati, Kathmandu, Nepal, affiliated to Tribhuvan University (TU), Kirtipur, Kathmandu, Nepal; Aggregate: 67.25%; **Feb'21**

## TECHNICAL SKILLS

- **Programming Languages:** Python, JavaScript, Bash
- **Cloud Platforms:** AWS (EC2, S3, RDS, Lambda, CloudFormation)
- **CI/CD Tools:** Jenkins, GitLab CI
- **Containerization:** Docker, Kubernetes
- **Databases:** SQL, MongoDB
- **Web Technologies:** HTML5, CSS, React.js, Node.js,
- **Tools:** Git, Terraform, Ansible
- **Operating Systems:** Linux, Windows
- **APIs:** REST, GraphQL

## WORK EXPERIENCE

*Software Engineer, Yasok Systems Pvt Limited., Kathmandu*

*Oct'22 – July'23*

- Designed and implemented CI/CD pipelines using Jenkins and GitLab CI, reducing deployment time by 30%.
- Managed AWS cloud infrastructure, optimizing EC2, S3, and RDS for cost and performance.
- Deployed and orchestrated containerized applications with Docker and Kubernetes, improving scalability.
- Developed Python and Bash automation scripts, streamlining operational workflows.
- Implemented Infrastructure as Code (IaC) with Terraform, minimizing configuration errors.
- Consulted on enterprise search solutions, enhancing indexing and UI performance.

## INTERNSHIPS

*Front-end developer intern, HamroPatro, Kathmandu*

*Mar - Sep'22*

- Developed features for HamroGifts platform using SvelteKit, TypeScript, and JavaScript, supporting 3,000 daily users.
- Migrated legacy code to modern frameworks, improving mobile and desktop performance.
- Collaborated in Agile environment, following SDLC best practices.

*Back-end developer intern, WEN Solutions, Kathmandu*

*Jun'19 – Dec'20*

- Built WordPress themes and plugins using PHP and MySQL.
- Migrated HTML/CSS to React.js, enhancing application interactivity.
- Worked with front-end teams to integrate cohesive codebases.

## TEACHING EXPERIENCE

*Teaching Assistant for ENGR 1213L, Engineering Computing Lab*

*Spring'2024*

- Led C programming and MATLAB lab sessions for 20 students.
- Graded assignments and assisted with debugging and problem-solving.

*Teaching Assistant for PHY 1011, University Physical Science Lab*

*Spring'2024 – Spring'2025*

- Guided 20 students through physical science experiments.
- Evaluated student work and maintained progress records.

## Research EXPERIENCE

*Han, Z., Adhikari, R., Thapa, A., McNally, L., Chakrabarty, J. H. (2025). Segment-based Analysis of 18F-fluorothymidine Positron Emission Tomography Unveils Significant Prognosis Predictor for Hematopoietic Stem Cell Transplantation Therapy. University of Central Oklahoma, Edmond, OK.*

- Developed 3D U-Net for bone segmentation in 18F-FLT PET scans, achieving 0.965 dice score.
- Identified thoracic region 18F-FLT uptake at d0 as a relapse predictor using random-forest model ( $p < 0.0053$ ).
- Established 0.14% ID/g threshold for clinical relapse prediction in HSCT patients.

*Han, Z., Kadioglu, S., Adhikari, R., Thapa, A. (2025). Graph Attention Transformer Neural Network for Screening of Post-Traumatic Epilepsy Based on Sparse Time-Series Electronic Health Records. University of Central Oklahoma, Edmond, OK.*

- Built HeteroGAT model on Cerner Real-World Data, achieving AUC-ROC of 0.80 for PTE prediction.
- Leveraged graph attention networks to capture patient-diagnosis relationships, outperforming random forest (AUC-ROC 0.77).
- Enhanced model with multi-head attention and diagnosis self-connections for improved sensitivity.

## ACADEMIC PROJECTS

*Student Management System*

*July'18 – May'19*

- Developed application for real-time schedules, attendance, and chat using Python and SQL.
- Served as core developer and project manager.

*Safa Samaj Mobile Application*

*Jun'19 – May'20*

- Built a waste management app with features like waste detection and truck tracking.
- Led development and project management.

## AWARDS AND ACHIEVEMENTS

- Mentored two employees at Yasok Systems, accelerating project milestones, Dec 2022.
- Selected for HamroPatro Fellowship Program, 2021.
- Runner-up at Drishti 2.0 Hackathon, Kathmandu Engineering College, Jul 2019.

## RELEVANT COURSEWORK

- Software Engineering
- Computer Networks and Security
- Project Management
- Database Management System
- Data Structures and Algorithms