

ARUN KOTHARI

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EDUCATION

Master of Computer Science, Arizona State University

August 2023 – May 2025

Coursework: Cloud Computing, Data Visualization, Machine Learning, Software Security

GPA: 3.8/4.0

Bachelor of Technology Computer Science, Amity University

July 2019 – July 2023

Coursework: Data Structures, Object Oriented Programming, Database Management, Software Engineering

GPA: 8/10

SKILLS

Programming Languages: Python, JavaScript, TypeScript, C, C++, Java, Rust, Go

Frontend Development: HTML, CSS, React, Tailwind CSS, Angular, Shadcn, Material UI

Backend Development: Microservices, MongoDB, MySQL, Node, Express, Flask, REST API, .NET, GraphQL, Kafka

AWS Cloud: Lambda, S3, EC2, Autoscaling, CloudWatch, SQS, CloudFront, ECR

DevOps: Docker, Kubernetes, Container Orchestration, CI/CD, Jenkins, Troubleshooting, GitHub Actions

Software Development Practices: Agile, Scrum, Jira, Test Driven Development, GitHub, Continuous Development and Integration, Data Structures and Algorithms

Intelligent Systems: Machine Learning, Deep Learning, CUDA, GANs, Transformer, Pytorch, Keras, TensorFlow, Data Analysis, Computer Vision, NLP

INTERNSHIP EXPERIENCE

Software Engineer

December 2023 – Present

Crozier Group at ASU

Arizona, USA

Tech Stack: ReactJs, JavaScript, Python, U-Net Model, Image Segmentation, Computer Vision, P5js

- Analyze oxygen atom movements during CeO2 reaction using image segmentation, reducing manual work.
- Develop an interactive website, boosting high school student engagement in atomic research and nanoparticle studies.
- Deliver weekly presentations, enhancing team communication and collaboration, increasing project speed and engagement.

Machine Learning Intern

March 2023 – April 2023

Travvir

Uttar Pradesh, India

Tech Stack: Computer Vision, NERF, Image Segmentation, 3D Reconstruction

- Tested 15 new machine learning models and 10 research papers, increasing efficiency through updated technology solutions.
- Acquired required knowledge in point clouds and 3D reconstruction within 1 month, contributing to improving product performance.

PROJECTS & COURSE WORK EXPERIENCE

Shortcut Launcher – Productivity Tool (Open Source)

[GitHub](#)

Tech Stack: Electron, React, Tailwind CSS

- Developed a cross-platform desktop app that displays custom keyboard shortcuts on a single hotkey press.
- Runs in the background on system startup and allows real-time updates through a config file.
- Versatile responsive design enables usage for other on-demand tasks like viewing to-do lists or quick notes.
- Published a portable .exe version for Windows for easy use without installation.

White Noises – Responsive website to help meditate on nature sounds, Personal Project

[Live](#) | [GitHub](#)

Tech Stack: React, Tailwind, MongoDB, AWS SQS, AWS CloudFront, AWS S3, AWS EC2, HuggingFace, NLP, Ffmpeg, AWS Lambda

- Executed a responsive website with video playback, upload and commenting functionalities, increasing user engagement.
- Designed scalable architecture using microservices with agile methodology and achieved faster inter-service communication.
- Enhanced user experience through sentiment analysis on comments, content delivery networks, adaptive buffering, and efficient data retrieval.

Face Recognition System, Course Work

[GitHub](#)

Tech Stack: NGINX, AWS SQS, AWS S3, AWS EC2, Flask, Python, Autoscaling, Microservices

- Designed and implemented a highly efficient face recognition system on AWS, optimizing system architecture to handle over 1000 requests in less than 5 seconds for rapid and reliable facial recognition tasks.

Find more of my blogs and projects at: heyitsarun.com

CERTIFICATIONS AND PUBLICATIONS

- A-Z Deep Learning
- Responsive Web Design
- Computer Vision and Image Processing – Fundamentals and Applications
- Natural Language Processing
- A-Z Machine Learning
- GANs Specialization
- Zero to GANs
- 4 Star SQL at Hacker Rank & 400+ Leetcode problems solved
- Ensemble methods on NSL-KDD [\[Paper\]](#)
- Human pose segmentation MADS [\[Paper\]](#)
- An efficient deep neural framework for nucleus [\[Paper\]](#)