Debopriyo Roy

Canada | +1 782-778-7084 | depriyo.inbox@gmail.com |Github | LinkedIN

Education

West Bengal University of Technology	West Bengal, India
Bachelor's In Electronics & Communication Engineering. Cumulative Average: 75.2%	May 2012-May2016
Calcutta University (ALL INDIA GATE RANK: 583)	West Bengal, India
Master's In Technology in VLSI Design and Embedded System (Drop-out)	Sept 2021- Dec 2022
Memorial university Of Newfoundland	St John's, NL
Master's In Applied Science (Masc.): Computer Engineering. Cumulative Average: 76.2%	Jan 2023-Sept 2024

Work Experience

Centre for Analytics, Informatics and Research (CAIR) @ MUN. — St John's, NL
Software Engineer. — July 2025 - Present

Talent Opportunity Hub: Developed a Django-based AI-powered job-matching portal that connects students with academic and industry opportunities.
- o Built multi-step student & employer onboarding with verification and admin approval workflows.
- o Integrated AI-driven project–student matching using skills tagging and dynamic dashboards.
- o Designed a responsive UI with Bootstrap 5 + HTMX for seamless user experience.
- o Implemented full DevOps enablement via Docker/Podman containers, devcontainer, and CI/CD workflows.
- o Stack: Python 3.12, Django, HTMX, Bootstrap 5, Docker, Podman, uv, GitHub Action.

Bengal College of Polytechnic — West Bengal, India
Assistant Professor. — Jan 2020-July 2020
- o Taught Analog and Digital Electronics and Control Systems Engineering to strengthen students' core concepts.
- o Developed and delivered engaging lectures, lab sessions, and assessments to connect theoretical learning with real-world applications.
- o Guided and mentored students in academic projects, encouraging critical thinking, creativity, and problem-solving in the field of electronics and control engineering.

EMSIG Technologies Pvt Ltd. — Mumbai, India
Application Specific Integrated Circuit (ASIC) Design Engineer. — Aug 2017-Dec 2019
- o Contributed to R&D projects with IIT Kharagpur and DRDO on ASIC/VLSI design and embedded hardware for defense and biomedical applications.
- o Supported the Fatigue Monitoring System for the Indian Air Force and Cognitive State Assessment System by assisting in analog and mixed-signal circuit design, schematic capture, and simulation using Cadence Virtuoso, along with Verilog-based RTL design and FPGA prototyping.
- o Worked on sensor interfacing, signal conditioning, and data conversion (ADC/DAC) modules, performing functional verification, timing analysis, and MATLAB/Simulink-based algorithm validation to ensure real-time reliability and low-power performance.

Indian Institute of Technology, Kharagpur — West Bengal, India
Circuit Design Intern — Aug 2016-Dec2017
- o Contributed to R&D projects by designing and simulating analog and digital circuits using Cadence Virtuoso and LTSpice.
- o Optimized circuit efficiency and power consumption through simulation-based layout verification and performance analysis.
- o Worked with researchers on VLSI design and circuit optimization using industry-standard EDA tools.

Skills

Cloud	EC2,S3,RDS,Lambda,CloudFront,Cloudwatch,IAM,WAF,EventBridge,SNS.
DevOps	Docker, Podman, DevContainer, GitHub Actions, Git, CI/CD,Jenkins,Prometheus
Architecture & Networking	Amazon Elastic Load Balancer, Auto Scaling Group, AWS X-Ray
Database Management	DynamoDb, Glue, Athena, SQLlite, Postgres, Redshift Spectrum
Programming languages	Python, SQL, GitBash, Verilog, MATLAB, YAML/HCL
Frameworks	Python, Django, HTMX, CSS, Bootstrap 5, Verilog, MATLAB, Simulink, Matplotlib
Security	AWS Secrets Manager, AWS KMS (Key Management Service), CloudFormation/Terraform/Ansible
Hardware & EDA Tools	Cadence Virtuoso, Xilinx, LTSpice, FPGA Design, ASIC/VLSI Design, ADC/DAC Modules

Projects

CloudScale WebApp Deployment.
Tools: AWS EC2, VPC (Multi-AZ), ALB,Auto Scaling, Aurora RDS,S3, CloudFront, IAM, WAF, Secrets Manager,Route 53
Description: Implimented and deployed a production-grade, fault-tolerant web application on AWS using Multi-AZ VPC, ALB, Auto Scaling,S3 and Aurora RDS.

TerraScale: Automated AWS Web Infrastructure Deployment with Terraform.
Tools: Terraform CLI, Terraform Cloud, GitHub Actions, AWS (VPC, EC2, ALB, Auto Scaling, RDS, S3, CloudFront, IAM, Security Groups, CloudWatch)
Description: Developed a highly available AWS web app with Terraform Cloud (VCS-driven workflow, remote state, workspaces), including VPC multi-AZ networking, ALB + Auto Scaling, Aurora RDS, CloudFront + S3, and CI/CD with GitHub Actions.

Project: Personal Portfolio Website.
Tools: HTML, CSS,PHP,Composer,Javascript.
Description: Designed a responsive portfolio website featuring profile, projects, and contact form functionality.

Certifications

AWS Certified Solutions Architect – Associate.

Terraform Associate (003) — HashiCorp Certification,Udemy