

FUNDAMENTALS OF AI  
EXPLORING DNN ARCHITECTURES  
GIT AND PYTHON ESSENTIALS  
BUILDING THE FIRST NEURAL NETWORKS  
INTRODUCTION TO PYTORCH  
BACKPROPAGATION AND ADVANCED DNN  
IN-DEPTH CODING PRACTICE  
BATCH NORMALIZATION, REGULARIZATION  
ADVANCED CONVOLUTIONS  
RESIDUAL CONNECTIONS IN CNNs  
CLASS ACTIVATION MAPS, LRS, OPTIMIZER  
PYTORCH LIGHTNING AND MLOPS  
TRAINING AND SCALING ON AWS IN BUDGET  
YOLO AND OBJECT DETECTION TECHNIQUES  
INTRODUCTION TO TRANSFORMERS - PART I

# THE SCHOOL OF AI

## DEEP VISION

INTRODUCTION TO TRANSFORMERS  
TRANSFORMER ARCHITECTURES  
BERT, GPT AND VIT  
UNETs, VARIATIONAL AUTOENCODERS  
CLIP MODELS AND TRAINING  
GENERATIVE ART AND STABLE DIFFUSION;  
GPT AND BEYOND  
TRAINING TRANSFORMER FROM SCRATCH  
REINFORCEMENT LEARNING PART I  
REINFORCEMENT LEARNING PART II  
RLHF AND DPO  
ORA, QUANTIZATION, AND FINE TUNING  
TRAINING CHATGPT FROM SCRATCH  
TRAINING MULTI-MODAL GPTs  
CAPSTONE PROJECT

### CERTIFICATE OF PARTICIPATION

IS PRESENTED TO

SIVAKUMAR RAJENDRAN

FOR PARTICIPATING IN THE  
**EXTENSIVE & REIMAGINED AI (ERA-V2) PROGRAM 2024**



ROHAN SHRAVAN

COURSE GUIDE