1. **Deep Learning with PyTorch: Zero to GANs**, by Jovia.
2. **Artificial intelligence engineer with eight projects**), Simplilearn, June 2020 - March 2021. **Skills and project achieved:**
    - **Introduction to Artificial Intelligence:** decoding AI, fundamentals of ML and DL, ML workflow, and performance metrics.
    - **Data Science with Python:** intro to data science, intro to data analysis, statistical analysis and business applications, python for data science, mathematical computing with python (Numpy), scientific computing with python (Scipy), data manipulation with Pandas, ML with Scikit-learn, NLP with Scikit-Learn, Data visualization in Python using matplotlib, web scrapping with beautiful soup, and Python integration with Hadoop MapReduce and Spark.
    - **Machine Learning:** intro to AI and ML, data preprocessing, supervised learning, feature engineering, supervised learning classification, unsupervised learning, time series modeling, ensemble learning, recommender systems, and text mining.
    - **Deep Learning Fundamentals:** intro to deep learning, deep learning models, additional deep learning models, and deep learning platforms and libraries.
    - **Deep learning with Keras and TensorFlow:** intro to DL with Keras and TF, ANN, DNN, DNN optimization tuning interpretability, CNN, RNN, and autoencoders.
    - **Natural Language Processing:** intro to NLP, working with text Corpus, processing raw text with NLTK, text classification, finding useful information from piles of text, and developing a speech-to-text application using Python.
    - **Projects achieved:**
        - Project 1. **IBM HR Analytics Employee Attrition Modeling**
        - Project 2. **House Loan Data Analysis**
        - Project 3. **Building a user-based recommendation model for Amazon**
        - Project 4. **Identify the level of income qualification needed for families in Latin America**
        - Project 5. **Topic Analysis of Review Data**
        - Project 6. **Classify Hate vs. Nonhate Tweets**
        - Project 7. **Customer Service Requests Analysis**
        - Project 8. **AI Capstone Project held Finance, Retail, and E-commerce**
        - **GitHub hosts my projects, and labs are here**

3. **Advanced Certification Program in AI/ML,** IIIT Hyderabad ML Lab, September 2020 - March 2021. For more than a 6-month program. A lot of it was programming - learning Python, hacking voice skills on Alexa, Stock price prediction, Recommendation Systems, and learning to build models. But the most significant learning has been the ideal thinking behind ML algorithms - a constant focus on improving the performance of models while simplifying the inputs and features needed. Eventually, since ML is over

fifteen years of history, therefore, my feeling is just like I've barely touched the tip of the iceberg of that history, and learning this is just opening new challenging doors in the field of ML/AI. **Hackathons achieved:**

- Hackathon 1. **Voice Commands Based Ordering System**
- Hackathon 2. **Alexa Chatbot**
- Hackathon 3. **Expression Face Recognition - Mobile App**
- Mini-Hackathon 1. **Data Munging**
- Mini-Hackathon 2. **Aptitude Classification**
- Mini-Hackathon 3. **Author Identification**
- Mini-Hackathon 4. **Research Investigators Clustering**
- Mini-Hackathon 5. **Dogs vs. Cats Binary Class Classification with PyTorch**
- Mini-Hackathon 6**. Image Transformations - Kaggle Competition**, Kaggle **here**
- Mini-Hackathon 7. **Sales Forecast - Kaggle Competition**, Kaggle **here**
- GitHub hosts my Hackathons, Mini-Hackathons and labs are **here**

4. **Deep Learning with PyTorch OpenCV course with four Projects,** July 2020 - January 2021. **Skills and project achieved:**
    - **project achieved:**
        - Project 1. **Implement a CNN-based Image Classifier From scratch with PyTorch**
        - Project 2. **Kaggle Competition Classification**, Kaggle link **here**
        - Project 3. **Object Detection of Automatic Number Plate Recognition**
        - Project 4. **Kaggle Competition - Semantic Segmentation, Kaggle link here**
        - GitHub hosts my labs, and projects are **here**

5. **PyImageSearch Customers - PyImageSearch Gurus Course,** November 2020 - November 2022, **Skills achieved:** By completing 13 modules and multiple tests in 2 years, I gained an understanding of computer vision, and the fundamentals of computer vision algorithms include:

- Project name: **Deep Tsundoku**, August 2022 - September 2022. Role: **Team member About the project:** Deep Tsundoku is a bookshelf app that combines the serendipity of looking through real books with modern ways to find information. GitHub code is here, and Huggingface is hosting the model here.
- Project name: **Corpus-based PP-attachment Ambiguity Resolution in Arabic script**, Aug 2015. Role: **team member**. The project focuses on two significant linguistic ambiguities: prepositional phrase attachment and word sense ambiguity. We present a new supervised learning technique for PP-attachment based on a corpus that has been semantically annotated. King Abdul- Aziz University, Jeddah, KSA. Other members:

Ebtesam S.Bashammakh2 Areej Y. Bayahya3, Majed Al- Ghamdi, Dr. Imtiaz H. Khan5 P.G. Student, Department of Computer Science, Faculty of Computing and Information Technology, Jeddah, Saudi Arabia, Ebtesam.BaShammakh@gmail.com, Arigyahya@gmail.com, mj87mj@hotmail.com.

- Project name: **Handwritten Recognition in Arabic scripts based using Hidden Markov Model Approach**, Aug 2015, Role: Team member. About the project: HMM-based offline cursive Arabic handwriting recognition is addressed. The suggested method uses embedded training-based HMMs to improve character models by considering character context. Analytical without explicit segmentation, retrieved features prior to baseline estimation are statistical and structural to combine text and word image pixel distribution characteristics. King Abdul-Aziz University, Jeddah, KSA Another member: Dr.Abdullah A. S. Basuhail2 P.G. Student, Department of Computer Science, Faculty of Computing and Information Technology, Jeddah, Saudi Arabia, mh2015kaugmail.com, Associate Professor, Department of Computer Science, Faculty of Computing and Information Technology, Jeddah, Saudi Arabia abasuhailkau.edu.sa.
- Project name: **An Evaluation Code Metrics in C# based systems**, Aug 2016, King Abdul-Aziz University, Jeddah, KSA. Role: team member. About the project: The difficulty of keeping code trustworthy and maintainable rises in tandem with the complexity of modern software programmes. A group of software metrics known as "code metrics" can help programmers get insight into their work. The use of code metrics helps programmers determine which classes and/or methods need to be refactored or tested more carefully. During software development, teams can track progress, understand the current state of a project, and identify hazards. Another member: Dr. Wajdi Al Jedaibi2 P.G. Student, Department of Computer Science, Faculty of Computing and Information Technology, Jeddah, Saudi Arabia, mh2015kaugmail.com. Associate Professor, Department of Computer Science, Faculty of Computing and Information Technology, Jeddah, Saudi Arabia waljedaibigmail.com.
- Project name: **Detection Hidden Characters from Vehicles' Plates in Saudi Arabia**, Aug 2015, King Abdul- Aziz University, Jeddah, KSA. Role: team member. About the project: Compared to the methods utilized with license plates abroad, those in Saudi Arabia are less complicated. Recognization trees can be simplified if only a subset of characters is used. When tested with data derived from actual license plates, the devised approach yielded a perfect recognition rate for all characters recognized by the system. Another member: Dr. Abdullah A. S. Basuhail P.G. Student, Department of Computer Science, Faculty of Computing and Information Technology, Jeddah, Saudi Arabia, mh2015kaugmail.com. Associate Professor, Department of Computer Science, Faculty of Computing and Information Technology, Jeddah, Saudi Arabia abasuhailkau.edu.sa.