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| **IBM**  Professional Certificate (edX) | | | |
| **COURSE** | **PREREQUISITES** | **CONTENT** | **DURATION** |
| Micro-Bachelors in  Full Stack Cloud Application Development | None | 1. Introduction to Cloud Computing 2. Introduction to Cloud Development with HTML5, CSS3, and JS 3. Developing Cloud Native Applications 4. Developing Cloud Applications with Node.js and React 5. Introduction to Containers, Kubernetes and Open-Shit 6. Python Basic for Data Science 7. Python for AI and Development Project 8. Django Application Development with SQL and Databases 9. Micro-services, Server-less, Open-Shift 10. Full Stack Application Development Project 11. Cloud Application Developer Capstone | Months: 7  Hours: 5 - 8  Ac Credits: 3  Cost: 602.10 USD  Self-Placed |
| Professional Certificate  DevOps and Software Engineering | None | 1. Introduction to DevOps 2. Introduction to Cloud Computing 3. Introduction to Agile Development and Scrum 4. Hands-on Intro to Linux Commands and Shell Scripting 5. Getting Started with Git and GitHub 6. Python for Data Science, AI and Development 7. Python Project for AI and Application Development 8. Intro to Containers w/ Docker, Kubernetes and Open-Shift 9. App Development using Micro-services and Server-less 10. Introduction to Test Driven Development 11. Continuous Integration and Continuous Delivery 12. Application Security and Monitoring 13. DevOps Capstone Project | Months: 12 |

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| **Harvard**  Professional Certificate (edx)  CS50’s Computer Science | | | |
| **COURSE** | **PREREQUISITES** | **CONTENT** | **DURATION** |
| CS50’s Understanding Technology | Language: English  None | 1. Internet 2. Multimedia 3. Security 4. Web Development 5. Programming | Weeks: 6  Hours: 2 - 6  Self-Placed |
| CS50’s Introduction to Computer Science | Language: English  None | 1. Computer Science and Programming 2. Think Algorithmically and solve Problems Efficiently 3. Concepts - Abstraction and Encapsulation 4. Concepts - Algorithms, and Data Structures 5. Concepts - Resource Management and Security 6. Concepts - Software Engineering and Web Development 7. Familiarity with - C, Python, SQL 8. Familiarity with - JS, CSS and HTML 9. Vibrant Community of Like-Minded Learners From All Levels | Weeks: 12  Hours: 6 - 18  Self-Placed |
| CS50’s Computer Science for Lawyers | Language: English  None | 1. Computational Thinking 2. Programming Languages 3. Algorithms, Data Structures 4. Cryptography and Cybersecurity 5. Internet Technologies, Cloud Computing 6. Web Programming 7. Database Design 8. Cybersecurity, Continued 9. Challenges at the Intersection of Law and Technology | Weeks: 10  Hours: 3 – 6  Self-Placed |

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| Web Programming with Python and JS | Language: English  CS50 / Programming | 1. HTML, CSS 2. Git 3. Python with Django 4. SQL, Models, and Migrations 5. JavaScript 6. User Interfaces 7. Testing, CI/CD 8. Scalability and Security | Weeks: 12  Hours: 6 – 9  Self-Placed |
| Introduction to AI with Python | Language: English  CS50 / python | 1. Graph Search Algorithms 2. Adversarial Search 3. Knowledge Representation 4. Logical Inference 5. Probability Theory 6. Bayesian Networks 7. Markov Models 8. Constraint Satisfaction 9. Machine Learning 10. Reinforcement Learning 11. Neural Networks 12. Natural language processing | Weeks: 7  Hours: 10 – 30  Self-Placed |
| Mobile App with React Native | Language: English  CS50 / HTM, CSS, JS | 1. JavaScript and ES6 2. React, JSX 3. Components, Props, State, Style 4. Components, Views, User Input 5. Debugging 6. Data 7. Navigation 8. Expo Components 9. Redux 10. Performance 11. Shipping, Testing | Weeks: 13  Hours: 6 – 9  Self-Placed |
| Game Development | Language: English  CS50 / Programming | 1. Principles of 2d and 3d Graphics 2. Animation, Sound, Collision Detection 3. Frameworks Like Unity and Love-2d 4. Language like – LUA and C# 5. Understanding of Basics of Game Design and Development | Weeks: 12  Hours: 6 – 9  Self-Placed |
| Cost: 313.20 USD (30,000 BDT) – Introduction to Computer Science + Technology | Web | Mobile | Game | AI | Lawyers | | | |

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| **Massachusetts Institute of Technology**  Professional Certificate (edX) | | | |
| **COURSE** | **PREREQUISITES** | **CONTENT** | **DURATION** |
| Introduction to Computer Science  and Programming Using Python  (6.00.1x) | Language: English  High School - Algebra  High School - Reasonable Aptitude for Mathematics  Programming Knowledge | 1. A Notion of Computation 2. Python Programming Language 3. Some Simple Algorithms 4. Testing and Debugging 5. Informal Intro to Algorithmic Complexity 6. Data Structure | Week: 9  Hours: 14 - 16  Instructor-led  Cost: 135 USD |
| Intro to Computational Thinking  and Data Science | Language: English  6.00.1x | 1. Plotting with the PYLab Package 2. Stochastic Programming and Statistical Thinking 3. Monte Carlo Simulations | Weeks: 9  Hours: 14 - 16  Instructor-led |
| Artificial Intelligence:  Implications for Business Strategy | Language: English | 1. An Introduction to Artificial Intelligence 2. Machine Learning in Business 3. Natural Language Processing in Business 4. Robotics in Business 5. Artificial Intelligence in Business and Society 6. The Future of Artificial Intelligence | Weeks: 6  Hours: 6 - 8  Cost: 3200 USD |
| Machine Learning in Business | Language: English | 1. Introduction to Machine Learning 2. Implementing Machine Learning in a Business 3. Sensing the Physical World 4. Helping Machines Learn to Use Language 5. Finding Patterns in Human Transactions 6. Machine Learning Challenges and Future | Weeks: 6  Hours: 6 - 8 |
| Human-Computer Interaction  For User Experience Design | Language: English  None | 1. The Essence of Interaction Design 2. Natural Interaction 3. Collaborative Computer Interaction 4. Intelligent User Interfaces and Prototyping 5. Multimedia, Speech, Vision in Computer Interaction 6. The Future Directions of User Interaction | Weeks: 6  Hours: 8 - 10 |
| Computational Thinking  for Modeling and Simulation | Language: English  Algebra  Calculus | 1. What is Computational Thinking 2. Interpolation and Randomness 3. Integration and Differentiation 4. Solving Equations | Week: 9  Hours: 3 - 5  Instructor-led |