

## Foundations of AI by GPT 3.5 (1/12/2023)

### Step 1: Foundations

#### Resources:

Book: "Python Crash Course" by Eric Matthes

Online Course: <https://www.codecademy.com/learn/learn-python>

Interactive Platform: <https://www.hackerrank.com/domains/tutorials/10-days-of-python>

### Step 2: Programming for AI

#### Resources:

##### Course:

<https://www.udemy.com/course/python-for-data-science-and-machine-learning-bootcamp/>

Book: "Python Data Science Handbook" by Jake VanderPlas

Platform: Kaggle: Complete Python notebooks, participate in competitions.

Kaggle: <https://www.kaggle.com/>

### Step 3: Mathematics Fundamentals

#### Resources:

Book: "Mathematics for Machine Learning" by Marc Peter Deisenroth, A Aldo Faisal, Cheng Soon Ong

Online Course: <https://www.khanacademy.org/math>

Course: <https://www.coursera.org/specializations/essential-mathematics>

### Step 4: Introduction to AI and Machine Learning

#### Resources:

Course: <https://www.coursera.org/learn/machine-learning>

Book: "Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow" by Aurélien Géron

### Step 5: AI Frameworks and Libraries

#### Resources:

Documentation: TensorFlow, PyTorch

Courses: TensorFlow in Practice

(<https://www.coursera.org/specializations/tensorflow-in-practice>), Deep Learning with PyTorch: A 60 Minute Blitz

([https://pytorch.org/tutorials/beginner/deep\\_learning\\_60min\\_blitz.html](https://pytorch.org/tutorials/beginner/deep_learning_60min_blitz.html))

### Step 6: Projects and Practical Experience

#### Resources:

Platform: GitHub: Contribute to open source projects, create your repositories.

Competitions: Kaggle: Participate in competitions and collaborate with others.

### Step 7: Read Research Papers

#### Resources:

Platform: arXiv (<https://arxiv.org/>), Google Scholar

Course: How to Read a Paper

(<https://web.stanford.edu/class/ee384m/Handouts/HowtoReadPaper.pdf>)

### Step 8: AI Communities

#### Resources:

Forums: Stack Overflow, Reddit - r/MachineLearning  
(<https://www.reddit.com/r/MachineLearning/>)  
Meetups: Attend local AI meetups and conferences.

#### Step 9: Advanced Topics and Specializations

Resources:

Courses: Natural Language Processing Specialization  
(<https://www.coursera.org/specializations/natural-language-processing>), Deep Learning Specialization (<https://www.coursera.org/specializations/deep-learning>)  
Books: "Deep Learning" by Ian Goodfellow, Yoshua Bengio, and Aaron Courville

#### Step 10: Continuous Learning and Specialization

Resources:

Platform: Follow AI blogs, podcasts, and subscribe to newsletters.

Advanced Courses: Pursue advanced courses based on your interest and career goals.

#### Schedule/Flowchart

Month	Focus Area	Activities/Resources
1-2	Python Basics	Python Crash Course, Codecademy's Python Course
3-4	Programming for AI Projects	Python for Data Science and ML Bootcamp, Kaggle
5-6	Mathematics Fundamental for AI	Math for ML book, Khan Academy, Essential Math
7-8	Introduction to ML	Andrew Ng's ML Course, Hands-On ML Book
9-10	AI Frameworks Practice Course	TensorFlow, PyTorch Documentation, TensorFlow in
11-12	Projects	GitHub Contributions, Kaggle Competitions
13-14	Research Papers Course	Read influential papers, How to Read a Paper
15-16	AI Communities	Engage in forums, attend meetups, join online communities
17-18	Advanced Topics	Specialization Courses, Deep Learning Book
19-20	Continuous Learning trends	Follow AI blogs, podcasts, explore emerging
21-24	Specialization advanced courses	Choose an AI domain for specialization, pursue

Remember, this is just a suggested plan. Be flexible and adjust based on your progress and interests. Real-world projects and hands-on experience are crucial, so try to apply your knowledge as you learn. Best of luck on your AI journey!