Python Bootcamp for AI

Week 1: 15.09-19.09.2025

	Monday	Tuesday	Wednesday	Thursday	Friday
	Introduction to Python	Python Tools	Signal Processing in Python	Introduction to ML	Modern Techniques for ML
09:00-10:30	Syntax, Variables, Data Types	Environments and Conda	Signal Processing (SP) Theory	ML Theory	Mini-project 1
10:30-10:45	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:45-12:00	Control Flow	Math and Visualization Intro	Programming SP for 1D signals	Intro to Pytorch	Mini-project 2
12:00-13:00	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
13:00-14:30	Classes, Objects, Polymorphism	Data Exploration and Analysis	Programming SP for 2D signals	Regression	Present mini-projects + Q&A
14:30-14:45	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
14:45-17:00	Inheritence models, OOP	Basic Image Processing	Practical application for SP	Classification	Present mini-projects + Q&A

AI Applications
Week 2: 22.09-26.09.2025

	Monday	Tuesday	Wednesday	Thursday	Friday
	Computer Vision	Speech Processing	Biomedical Engineering	Embedded AI	Project Allocation
09:00-10:30	Image Recognition (I)	Speech-To-Text (STT)	Introduction to AI in Biomedical Engineering	Deploying a lightweight model (I)	Final Track Presentations Recap
10:30-10:45	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:45-12:00	Image Recognition (II)	Text-to-Speech (TTS)	Biomedical data processing	Deploying a lightweight model (II)	Discussions
12:00-13:00	Lunch Break	Lunch Break	Lunch Break	Lunch Break	Lunch Break
13:00-15:00	Object Segmentation	Human-Machine Interaction (I)	Biomedical Applications (I)	Raspberry Pi applications	Team formation + Project kick-off (I)
15:00-15:30	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
15:30-17:00	Image Generation	Human-Machine Interaction (II)	Biomedical Applications (II)	Jetson Nano Applications	Presentations