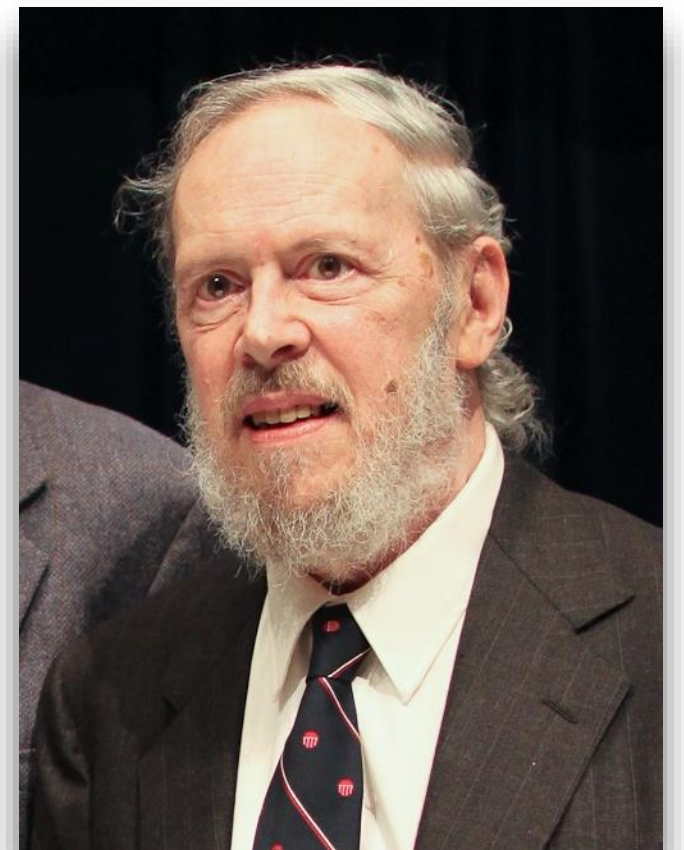"The only way to learn a new programming language is by writing programs in it."

– Dennis Ritchie (1941 – 2011)

MATLAB – From Zero to Hero
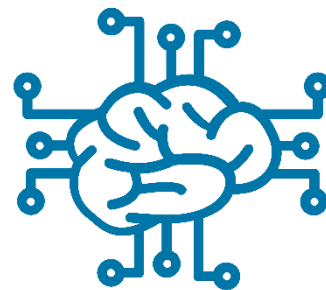
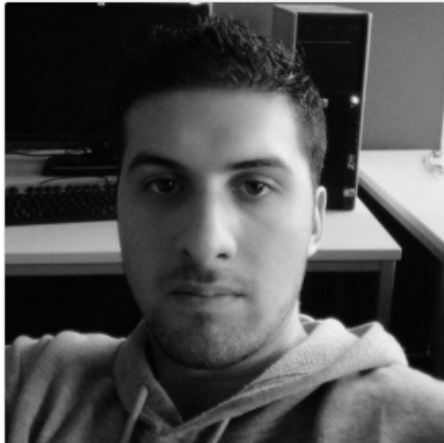**Jousef Murad**
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Github

github.com/jousefm/

Planned Series

MATLAB

Fundamentals

- What is MATLAB? Today!
- Basics (Arithmetic, Data Types, Conventions, Special Values)
- Special Operations (Relational, abs/sign ...)
- Scripts
- Function

Git & Shell ?

MATLAB

Intermediate

- Vectors
- Matrices
- Save & Load Data
- Functions
- Conditional Statements
- Loops

MATLAB

Advanced

→ **Simulink**

- Debugging
- Symbolic Mathematics
- Solve Differential Equation
- Simulink
- Advances Examples (Lotka–Voltera Equations, Spring Pendulum...)

Prerequisites

Questions & Comments

- Social Media Channels

- Comment Section

- Q&A Videos (Instagram) / (Twitch)
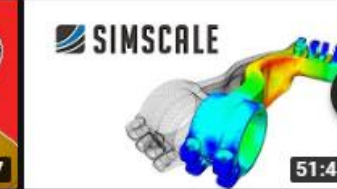
Subscription & Notification

Subscription

patreon.com/theengiineer

Learning Objectives

- You know what MATLAB is

- You know how to install MATLAB on your machine

- You know what MATLAB can be used for

Let's get started!
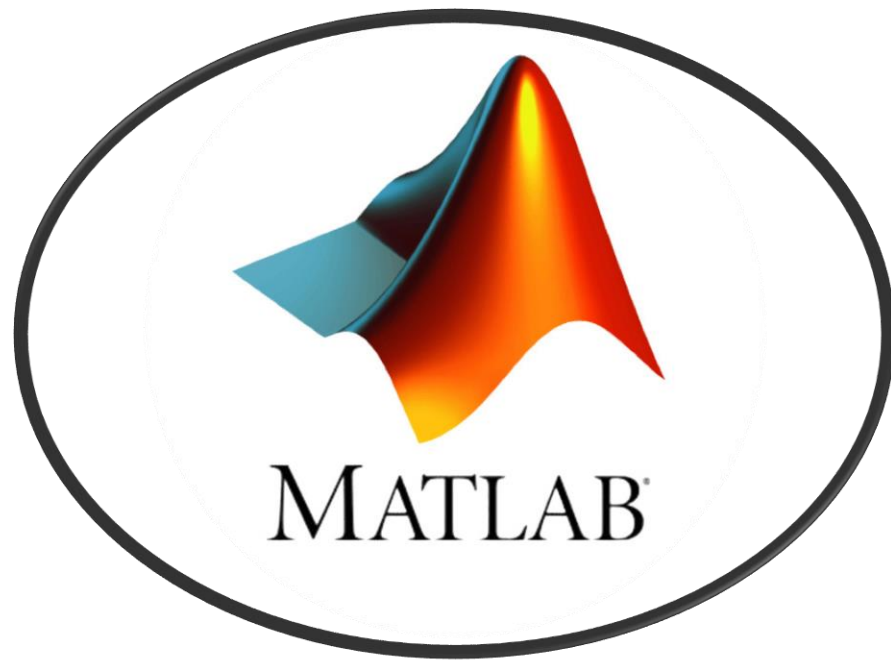
High-Level Programming Language

Easy to Read

Dynamic

Multi-Paradigm

The History of MATLAB

- MATLAB = MATrix LABoratory

- Developed late 1970s by Cleve Moler

- Alternatives for LINPACK & EISPACK to avoid FORTRAN

- Initial release 1984 by MathWorks

What is MATLAB used for?

- Data Analytics
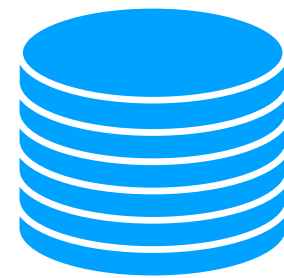
- Robotics

- Mechatronics

- Image Processing and Computer Vision

- Control Systems

- Embedded System

Next Video

- MATLAB – The Intelligent Calculator

- Save your precious work – What are Scripts?

- Commenting Code