**Yousef Ahmed Gomaa**

Mechatronics Engineer

# Cairo, Egypt | +201030063420 | usuf.gomaa@gmail.com

# Summary

Mechatronics Engineer with a strong academic background in **Advanced Mathematics (Math 1 – Math 5)** and hands-on experience in applying mathematics across **engineering, fluid mechanics, statistics, and artificial intelligence**. Experienced in **teaching and summarizing mathematical concepts**, creating comprehensive study notes, and delivering clear explanations to diverse learners. Skilled in applying **linear algebra, calculus, probability, and differential equations** to real-world problems. Passionate about **applied mathematics, computational modeling, and AI-driven solutions**.

# Experience

**Math Instructor**

* Taught Advanced Mathematics (Calculus, Algebra, Probability, Statistics) to university students and prepared structured study notes & summaries.
* Designed simplified approaches to explain complex mathematical concepts for effective learning.

**Applications for Mathematics in Engineering & AI**

* Applied differential equations and fluid mechanics models to solve engineering problems.
* Integrated probability, statistics, and linear algebra into AI and machine learning projects.
* Experienced in building mathematical models for classification and prediction tasks.

# Education

**BSc in Mechatronics Engineering (Senior)  
Mansoura University, Egypt (Expected 2026)  
GPA: 3.8 / 4.0**

# Technical Skills

* **Advanced Mathematics (Math 1 – Math 5)**
* Linear Algebra, Calculus, Differential Equations, Probability, Statistics, Numerical Methods
* Mathematical Modeling & Simulation
* Applied Mathematics in **Fluid Mechanics** and **AI**
* Machine Learning & Statistical Analysis
* Problem Solving & Analytical Thinking
* Teaching & Summarizing Mathematical Concepts

# Projects

* **Hand Gesture Classification using Computer Vision**
* **Engineering Applications for Fluid Mechanics**