MEHAKPREET KAUR KHOSA

CONTACTS

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RELEVANT COURSES

- **Computer Science & AI:** Machine Learning, Artificial Intelligence, Computer Networks, Computer Organization, Operating Systems, Databases, System Analysis and Modeling, Theory of Computation
- **Mathematics & Statistics:** Probability and Statistics, Linear Algebra, Calculus I, II, III
- **Additional Topics:** Introduction to Economics, Physics I & II

LANGUAGES

- **Hindi - Mother tongue**
- **Punjabi - Mother tongue**
- **English - proficient**
- **Portuguese – proficient**

SOFT SKILLS

- **Team collaboration**
- **Analytical thinking**
- **Communication**
- **Problem Solving**

ABOUT ME

Passionate and dedicated senior Computer Science student at **Instituto Superior Técnico** with a robust foundation in **mathematics** and **programming**. I have a list of valuable skills and am Adept at tackling complex problem-solving and enthusiastic about applying theoretical knowledge to real-world projects. Have worked on various projects during my previous university year, the ones I enjoyed the most are mentioned in Projects. Eager to contribute to the field of **AI** and **software development**, with a focus on **algorithmic efficiency, data structures, and mathematical modeling**.

EDUCATION

Instituto Superior Técnico
BSc in Computer Engineering *(Expected July, 2025)*

SKILLS

Programming Languages: Python, C, C++, SQL, Java
Machine Learning & AI: TensorFlow, Scikit-learn, PuLP (Optimization), Model Training, Data Preprocessing
Software Development: Git, Linux, Debugging, System Analysis
Database Management: SQL, PostgreSQL, Query Optimization
Mathematical Optimization: Linear Programming, Constraint Solving, Operations Research
Networking & Systems: Computer Networks, Operating Systems, System Modeling

PROJECTS

Minesweeper Game in Python: Implemented the backend functionalities and logic for minesweeper.
Infection Spreading Model – Designed a predictive model using probabilistic methods to simulate the spread of infections over time.
Linear Programming for Max Profit: Developed an optimization model using PuLP to maximize business profit based on constraints and resources.
AI-Based Pipemania Solver: Built an AI-driven solver using Python to efficiently complete Pipemania puzzle levels.
Process Scheduler Simulation: Implemented scheduling algorithms (FCFS, Round Robin, etc.) in C++ to analyze CPU process efficiency.
System Modeling & UML Diagrams: Designed UML diagrams and system models to improve software architecture and design clarity.
Clinic Database Management System : Designed and implemented a relational database to store and manage clinic. Used SQL and PostgreSQL to write complex queries for efficient data retrieval, updating, and management