MAHDI CHERAGHALI **Envelope with solid fill** mahdi.cheraghali@gmail.com

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Berlin A black background with a black square

Description automatically generated with medium confidence https://github.com/ma6di

# EDUCATION

**Computer Science** | 42 Berlin 04.2024 – Current

* Intensive project-based / system programming /algorithms / C, C++ / Networking / OOP.

**Construction & Real Estate Management M.Eng. M.Sc.** 09.2022 – 09.2024

HTW Berlin & Metropolia UAS, Helsinki

* Project Management & Monitoring / LCA/ LCC / BIM / Feasibility Study / Tendering

# PROJECTS AND EXPERIENCES

* **Minishell** – Developed a UNIX shell with command execution, child processes, pipes, and built-ins, signals and parsing in C (Group project).
* **Push\_swap** – Designed and implemented an efficient sorting algorithm in C.
* **Cub3D** – Creating a 3D game environment with Ray-Casting technics and X11 library in C (Group project).
* **Philosophers** – Solving the famous “Dining philosophers’ problem” with multi-threading in C.
* **NetPractice** – Basics of networking and subtending with TCP/IP (IPv4).
* **Inception** – System administration through the use of Docker technology.
* **Soft Skills** – Peer to peer learning, self-learning, adaptability, problem-solving, teamwork, and independence.

### TECHNICAL SKILLS

* **Programming Languages:** C, C++, Bash, Shell Scripting
* **Development Tools:** Git, GitHub, Makefiles, Debuggers (GDB, LLDB), Valgrind
* **Core Concepts:** Algorithms, Data Structures, Code Optimization, Memory Management
* **Systems & Networking:** Linux (Ubuntu, macOS), System Calls, TCP/IP (IPv4), Network Debugging, Docker
* **Software Engineering:** Modular Programming, Version Control, Code Review, Team Collaboration
* **Problem-Solving:** Analytical Thinking, Debugging Complex Codebases, Self-Learning, Peer Mentorship

**Languages** English / Persian