

# Matei Dragusin

Automatică și Calculatoare, UPB Licență anul 3

Media pe ultimul an: 8,00

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## Aptitudini

networking, java, python, protocoale de comunicatie, algorithms, data structures, c++, c, oop

Limbi străine

Engleza

Pasiuni

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Cursuri preferate:

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## **EDUCAȚIE**

2022 - Prezent

Polytechnic University of Bucharest

Specializarea: BS in Computer Science

# PROIECTE ȘI ACTIVITĂȚI EXTRAȘCOLARE

#### **BitTorrent Protocol Implementation**

- Implemented a distributed BitTorrent-like protocol using MPI and Pthreads for peer-to-peer file sharing
- Developed a multi-threaded client architecture with separate download and upload threads for efficient file transfer
- Created a tracker system to coordinate swarm management and peer discovery
- Implemented efficient load balancing for segment distribution across peers to optimize network utilization
- Tools Used: C/C++, MPI, Pthreads, Distributed Systems, P2P Protocols

#### **Drone Delivery Game**

- Developed a 3D drone delivery game with third-person camera perspective using OpenGL and C++
- Implemented procedural terrain generation with height-based coloring and obstacle placement
- Created a package delivery system with collision detection and dynamic package attachment
- Designed an intuitive UI with minimap and directional indicators for improved navigation
- Tools Used: C++, OpenGL, GLSL Shaders, 3D Graphics Programming

## **IMDB Application**

- Designed and implemented a comprehensive IMDb-like platform that allows users to manage and interact with an extensive movie database
- Implemented advanced search and filtering functionality for movies, actors, and directors based on multiple criteria
- Created a robust rating and review system allowing users to rate movies and provide detailed reviews

• Tools Used: Java, OOP Principles, Collections Framework

### **Network Router Implementation**

- Developed a software router implementing core networking protocols including IP forwarding and ARP
- Built comprehensive error handling with ICMP message generation for network troubleshooting
- Designed and implemented efficient packet parsing and routing table management
- Tools Used: C, Network Protocols (IP, ARP, ICMP)