AKSHAT PASBOLA

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www.pasbola.eu | GitHub

PROFESSIONAL SUMMARY

Motivated and detail-oriented **Computer Science student** at **Technological University Dublin**, specializing in software development, embedded systems, and API-driven solutions. Demonstrates strong technical proficiency, leadership, and problem-solving skills through both academic excellence and real-world projects.

EDUCATION

Technological University Dublin (TU Dublin) — *B.Sc. in Computer Science (TU856) 2024 – 2028*
- GPA: **4.15 / 5** (First Year)
- Expected **2.1 Honours Degree**
- Relevant Coursework: Program Design, Object-Oriented Programming, Databases, Operating Systems, Web Development

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PROFESSIONAL EXPERIENCE

Peer Tutor — Technological University Dublin
June 2025 – Present

- Provide individual tutoring for first-year students in **Programming Design** and **OOP** modules.
- Facilitate understanding of key computer science concepts through tailored learning sessions.
- Coordinate with faculty to support supplemental exams and enhance student learning outcomes.
- Strengthened communication, leadership, and mentoring abilities through consistent student engagement.

PROJECTS

Digital Bus ETA Display System
- Engineered a real-time **bus ETA display** leveraging **Python**, **REST APIs (TFI)**

MAX7219 LED matrix
- Integrated live public transport data with robust error handling and optimized data refresh rates.
- Deployed on **Raspberry Pi**, demonstrating practical IoT implementation skills.

Embedded Interactive Game (STM32)
- Designed and developed an interactive game on an **STM32 microcontroller**, featuring custom gameplay, menus, and physical input controls using **C**.
- Managed memory and timing constraints to ensure smooth hardware-level execution.

Digital Clock with LED Matrix
- Created a **Python-based digital clock** utilizing four daisy-chained **MAX7219 LED matrices**.
- Implemented synchronized time display and low-power optimization techniques.

Portfolio Website
- Built and deployed a personal website to highlight academic and professional work: www.pasbola.eu.
- Employed responsive design principles using **HTML**, **CSS**, and **JavaScript**.

TECHNICAL SKILLS

Programming Languages: C, Python, JavaScript, Bash, Assembly
Frameworks & Tools: Node.js, STM32CubeIDE, Git, Linux Shell
Operating Systems: Ubuntu, Arch Linux, Raspbian, macOS, Windows
Core Competencies: Embedded Systems, REST API Integration, IoT Prototyping, Version Control, Problem Solving

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TEAMWORK / HACKATHONS

HackIreland | Workday Hackathon'25 | NASA Space Apps Challenge |
| Coding Civilization @ Maynooth University | CompSoc CTF 2026 @ University Of Galway |

References available upon request.