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PROFESSIONAL SUMMARY

Computer Science Student & Research Assistant at TU Delft that's focused on **full-stack architecture and local LLM optimization**. Experienced in technical international team **leadership** and **founding** community-driven initiatives.

EDUCATION

Technical University of Delft **2025 - 2028**
Bachelor of Computer Science and Engineering Delft

- Admitted after an exam (math, logic, algorithmic thinking, 1/10 acceptance rate).
- Currently studying version control, full-stack applications in Java and JavaScript and algorithms and data structures (Current Average: 8/10).

National College "I. L. Caragiale" **2021 - 2025**
Math-Info Bucharest

- Romanian high school curriculum, with focus on math and computer science. **First place** in the specialization (Final Grade: 9.93/10).
- Leader of the **international NSS** contest high school team which won for two consecutive years; Presentations were held in **Texas** and **California**.

WORK EXPERIENCE

The Human Quotient Lab TUDelft **Mar 2026 - Present**
Research Assistant Delft

- Implementing **HCI** research on LLMs into production code using a **localized** environment to **improve latency** and achieving an alignment in ideas between the user and LLM.
- Enhancing trust in **Small Language Models** by applying techniques to reduce hallucinations, achieving more accurate outputs with significantly **lower token** usage than Large Language Models.
- **Modularizing** the solutions into applicable wrappers for any LLM model, ensuring simple **deployment** for real use.

Step Up! **Jul 2024 - Mar 2025**
Project manager, **Founder** Bucharest

- **Founded** and managed a non-profit for **40+** students with **0** budget and **0** external funding that addressed the lack of career insights and resources for high school students through workshops.
- Applied leadership frameworks mastered during the Leaders Explore Program (top 30 selection in Bucharest) to coordinate 7 volunteers and secure partnerships with **IBM**, **Bosch** and more.
- (https://www.instagram.com/step.up_project/)

TECH PROJECTS

Spotyvibe | Flask, JavaScript, Python, Procfile **Dec 2025 - Jan 2026**

- Developed a Flask application to **map** Spotify listening history to emotional archetypes, using **GeminiAPI** for analysis.
- Integrated Spotify API via **OAuth 2.0** and handled session persistence using Flask-Session.
- Added a **"Demo Mode" fallback layer** using hardcoded datasets to bypass third-party API rate limits (Spotipy) and developer-mode whitelisting constraints, ensuring 100% uptime for reviewers.
- Deployed a multi-threaded web server on **Railway** using Gunicorn configurations to handle concurrent user requests efficiently.
- Repo: <https://github.com/davidmunteanu/Spotyvibe> | Link: <https://spotyvibe.up.railway.app/>

FoodPal (uni project) | Java, JavaFX, Mockito, Maven, Spring, TestFx, CI/CD, H2 **Nov 2025 - Jan 2026**

- Led a 6-person team to build a multi-module Java 24/ Spring Boot application, managing the **full-stack** integration of JavaFX and Spring with H2 persistence for a recipe sharing and nutrient tracking platform.
- Refactored the core architecture to a **Singleton**-patterned Controller structure using Google **Guice**, resolving recurring circular dependencies and ensuring **consistent state management**.
- Optimized **GitLab CI/CD** pipelines by **decoupling** client/server builds and implementing **artifact** caching; reduced total pipeline execution time and improved error isolation.
- Implemented branch protection rules and mandatory peer reviews to achieve a standardized Git workflow.

Document Analyzer | Ollama, JavaScript, Node.js **Feb 2026 – AI Guild Hackathon**

- Developed a Proof of Concept for a containerized, **local LLM** document analyser (Ollama/Node.js) designed for **high-privacy** research environments in a team of 6.
- Architected a system to **index** documentation into searchable segments, aiming to reduce manual search time for TU Delft research staff.

AI Cup (Team Epoch) | Model Training, Python **Mar 2026 - Present**

- Developing a classification model to identify 9 bird species from radar data to mitigate bird-strike risks at windfarms while maintaining operational efficiency.
- Implementing an ensemble approach using **XGBoost** and **Random Forest** classifiers to process high-dimensional radar telemetry, optimizing for **Mean Average Precision**.

NOTABLE EXPERIENCES AND AWARDS

CERN – “HSSIP-RO” **Jun 2024**
Summer Student Geneva

- Was part of the **top 24** students from all Romania to be selected by CERN to study at their institute in Geneva, Switzerland for 2 weeks.
- Presented **antimatter** research into a technical study and presentation.
- (<https://indico.cern.ch/event/1369306/>).

Royal Foundation Princess Margareta **Jun 2023 - Jan 2024**
Teacher (volunteer work) Bucharest

- Taught kids with a poor social condition from grades 6-12th **math**, **computer science**, Romanian and English.
- **Gamified** the teaching of core CS concepts using Scratch.

Dr Randall Perry Quiet Leadership Award (European Space Design Competition)

- Acted as **central lead** for a 28-member **international** team.
- Managed cross-departmental integration between 4 global sub-teams via real-time conflict resolution and **system-mapping** during a high-stakes 48-hour competition.

NSS Space Settlement Contest (National Space Society)

- Won **2nd** place (10th grade) and **4th** place (11th grade) out of 5000+ global entries. Presented our project at the International Space Development Conference (ISDC) in Frisco, TX (2023) and in Los Angeles, CA (2024).
- I contributed to **managing** the team and designing the innovative systems and **structure** of our space settlement.

TECHNICAL SKILLS

Proficient | Python (Flask, Pydantic), JavaScript (Node.js, Express.js), Java (Spring, JavaFX), HTML/CSS

Elementary | React, SQL, Assembly, C++

DevOps | Git, GitLab, GitHub, CI/CD

Fluency | English(C2), Romanian (Native)