Ankush Ahuja

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EXPERIENCE

Technical University of Vienna   *07. 2024 - 08. 2024*
Machine Learning Intern (Full-time)   Vienna, Austria

• Developed a search engine to find documents distributed on various platforms with one query

• Conducted ML research, compared different indexing and data retrieval methods

Dynatrace Austria GmbH   *07. 2024 - 08. 2024*
Machine Learning Intern (Full-time)   Vienna, Austria

• Developed workflow actions for the Dynatrace Slack App

• Gained insights about designing large applications and project management with SCRUM

Extra: Paramedic (Alternative Civilian Service)

EDUCATION

Technologisches Gewerbemuseum (TGM)   *09. 2020 - 06. 2025*
A Levels (Matura)   Vienna, Austria

• Specialized in Data Science & AI within the Department of Information Technology

• Diploma Thesis on efficient indexing & semantic search methods (Projects/Kayf)

• Activities: Student representative, class representative, fire emergency response team

• Graduated with distinction; GPA: 1.09 (Austrian grading scale: 1 = excellent, 5 = fail)

University of Vienna   *08. 2024*
Summer Courses, Computer Science & Astronomy   Vienna, Austria

PROJECTS

Vektor: General Purpose Search Layer and Assistant   *06.2025 – Ongoing*
Tools: C++, Python, MongoDB, FAISS   Machine Learning

• Developed a multimodal semantic search engine combining keyword and LLM-powered retrieval.

• Built a modular provider system for integrating external tools (e.g. GitHub, Jira, Slack).

• Implemented real-time assistant actions and RAG-based summarization for enterprise knowledge.

• Designed a knowledge graph to connect people, documents, and tools across silos.

Vata: Next-gen Collaborative Workspace   *09.2024 – Ongoing*
Tools: Next.js, C++, Python, MongoDB, FastAPI   Synchronization

• Built an encrypted, offline-first document collaboration platform with CRDT conflict resolution.

• Integrated real-time editing for structured docs, canvases, and calendar-linked meeting notes.

• Developed vault system supporting online/offline migration and P2P sync.

• Implemented E2EE with RBAC for secure multi-device access and sharing.

HPW: High-Performance Workflow Engine   *07.2024 – Ongoing*
Tools: C++, MongoDB   Automation

• Built a high-performance workflow execution engine in C++ with parallel execution and replay.

• Designed a high-level visual builder for technical and non-technical users with live inspection.

• Provided custom node SDKs and packaging tools for extending functionality across multiple languages.

• Integrated an AI assistant for natural language workflow generation, refactoring, and debugging.

[C.1]   Ahuja, Ankush and Kernegger, Leopold (2025). **Choros: A Distributed Coordination Framework for Multi-Robot Botball Systems**. In *Proceedings of the Global Conference on Educational Robotics (GCER 2025)*. KISS Institute for Practical Robotics, July 8–12, 2025, Norman, OK.

[C.2]   Kernegger, Leopold and Ahuja, Ankush (2025). **A Next.js Blockly-Based C++ Code Generator for a Custom Robotics Library**. In *Proceedings of the Global Conference on Educational Robotics (GCER 2025)*. KISS Institute for Practical Robotics, July 8–12, 2025, Norman, OK.

[T.1]   Ahuja, Ankush, et al. (2025). **Kayf.app: Data Centralization and Automation Platform**. Diploma thesis, Department of Information Technology, Technologisches Gewerbemuseum, Vienna, Austria. Supervisors: Prof. Raffael Hackspiel and Prof. Alexandra Posekany.

HONORS AND AWARDS

Jugend Innovativ – 3rd Place   *05.2025*
AWS
• Austria's leading competition for innovative student projects, with over 440 competing teams.

• Achieved 3rd place in the category Entrepreneurship with the project *Kayf.app*.

Sag's Multi – Finalist   *04.2025*
ORF
• Austria-wide multilingual speech competition hosted by ORF, promoting cultural diversity and expression.

• Reached the finals with a bilingual speech in English and German.

Austrian Olympiad in Informatics   *2024 & 2025*
OCG
• Austria's most prestigious and competitive algorithms and programming competition for high school students, organized by the Austrian Computer Society (OCG).

• In 2025: scored a perfect result in the first qualification round; placed among the Top 16 in the national semi-finals.

Award for Excellent GPA & Social Engagement   *2021–2025*
Technologenverband
• Annual award by the TGM alumni association for academic excellence and community engagement.

• Honored each year for a perfect GPA and contributions such as tutoring, organizing the prom, and the sports festival.

ADDITIONAL INFORMATION

Languages: German (native), Punjabi (native), English (fluent)
Certifications: Fire Safety Officer Training, ECDL Standard, Unternehmerfuehrerschein
Interests: Powerlifting, Public Speaking, Competitive Programming