

# Marvin Gülhan



## EDUCATION

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| <b>University of Bonn</b><br><i>Master of Science in Computer Science</i>                | Bonn, Germany<br>Oct. 2025 – present             |
| <b>University of Bonn</b><br><i>Bachelor of Science in Computer Science (Grade: 1.2)</i> | Bonn, Germany<br>Oct. 2022 – Sep. 2025           |
| <b>Rhein-Sieg-Gymnasium</b><br><i>Abitur (Grade: 1.0)</i>                                | Sankt Augustin, Germany<br>Aug. 2014 – June 2022 |
| <b>German International School of Silicon Valley</b><br><i>Semester Abroad</i>           | Mountain View (CA), USA<br>Aug. 2019 – Jan. 2020 |

## WORK EXPERIENCE & INTERNSHIPS

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| <b>Research Assistant</b><br><i>Fraunhofer Institute FKIE</i> <ul style="list-style-type: none"><li>Algorithm engineering for online graph problems</li><li>Research on RL algorithms for dynamic planning problems</li></ul>  | Wachtberg, Germany<br>Nov. 2023 – present        |
| <b>Formula Student Team Member</b><br><i>Bonn-Rhein-Sieg University of Applied Sciences (HBRS)</i> <ul style="list-style-type: none"><li>Member of the Formula Student team at HBRS</li><li>CFD simulation and aerodynamic design of the rear wing for the 2024 race car</li></ul> | Sankt Augustin, Germany<br>Sep. 2023 – Jun. 2025 |
| <b>Student Internship</b><br><i>German Aerospace Center (DLR)</i> <ul style="list-style-type: none"><li>Insights into aerospace engineering and research methods</li><li>Use of clustering methods for anomaly detection in fuel combustion of hybrid engines</li></ul>            | Cologne, Germany<br>Jan. 2020                    |

## PUBLICATIONS & PROJECTS

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| <b>Airlift Challenge: A Competition for Optimizing Cargo Delivery</b><br><ul style="list-style-type: none"><li>Co-author of a research paper on optimizing cargo delivery for Airlift Operations</li><li>Developed a routing algorithm coordinating heterogeneous aircraft across subgraphs to manage bottlenecks and disruptions in dynamic conditions, achieving 2nd place out of 40 teams</li></ul>   | 2025 |
| <b>Multi-Agent Reinforcement Learning for Complex and Dynamic Graph-Based Planning Problems</b><br><ul style="list-style-type: none"><li>Co-author of a peer-reviewed paper accepted at the 2026 International Conference on Military Communications and Information Systems (ICMCIS), Bath, UK</li><li>Demonstrated that Graph Reinforcement Learning policies can effectively solve complex, dynamic planning problems such as the Airlift Planning Problem (in-press)</li></ul> | 2026 |

## HONORS

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| <b>Deutschlandstipendium</b><br><i>Federal Ministry of Education and Research</i> <ul style="list-style-type: none"><li>Merit-based scholarship for outstanding academic performance</li></ul> | Bonn, Germany<br>Oct. 2024 & Oct. 2025 |
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## CORE SKILLS

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**Programming Languages:** Python, C++, Java  
**Technical Skills:** Graph RL, Multi-Agent RL, GNNs, PyTorch, HPC, CFD simulations  
**Languages:** German (native), English (C1), French (B1), Spanish (B1)