Fraunhofer SIT
Fraunhofer-Institut für Sichere Informationstechnologie

Institutsleiter
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Darmstadt, August 31, 2025

Reference Letter

Mr. Nico Munoz, born on October 29, 1998, worked from January 8, 2024, to August 31, 2025, as a student assistant at the Fraunhofer Institute for Secure Information Technology SIT, located in Darmstadt, with a workload of 60 hours per month.

Fraunhofer SIT is the largest contributor to the National Research Center for Applied Cybersecurity ATHENE, which is a joint institution of the Fraunhofer-Gesellschaft in cooperation with Fraunhofer IGD, the Technical University of Darmstadt, Goethe University Frankfurt, and Darmstadt University of Applied Sciences. ATHENE is headquartered in Darmstadt. It is the largest cybersecurity research center in Europe and aims to support the digitalization of society, government, and industry through research and development contributions in the field of cybersecurity.

The Fraunhofer-Gesellschaft, headquartered in Germany, is the world's leading organization for applied research. With its focus on future-oriented key technologies and the transfer of its results into industry and business, it plays a crucial role in the innovation process. As a pioneer and driver of innovative developments and scientific excellence, it contributes significantly to shaping our society and future. Founded in 1949, the organization operates 76 institutes and research facilities in Germany. Around 30,800 employees, primarily with backgrounds in natural sciences or engineering, work to generate an annual research volume of approximately €3.0 billion, of which €2.6 billion comes from contract research.

Mr. Munoz worked in the Cyber-Physical Systems Security department, where he significantly contributed to the further development of an evaluation platform for autonomous driving. Specifically, he examined various sensors - including camera, radar, ultrasound, and LiDAR - and, in this context, developed various user, client, and service methods for the sensors as well as a central SOME/IP middleware (Scalable Service-Oriented Middleware over IP) that controls all sensors. As part of this work, he developed a LiDAR management tool that supports extraction, capture, playback, printing, and visualization of LiDAR scan data. Furthermore, he contributed to the implementation of various functions based on a YOLO-based object detection model to virtualize sensor

measurement data, enabling optimized integration and further development. He also assisted in supervising other student assistants and coordinating tasks.

Due to his studies and his work as a student assistant, Mr. Munoz possesses strong technical knowledge, which he applied successfully in his field of work. He was always quick to understand new situations and handled them confidently and effectively. He consistently demonstrated high resilience and acted calmly, thoughtfully, and with strong focus. He was a valuable support to his work area. He completed all assigned tasks very well and with increasing independence.

Mr. Munoz always showed excellent motivation and commitment. The quality of his work was consistently far above average.

Particularly noteworthy is that Mr. Munoz played a major role in enabling the first version of the evaluation platform for autonomous driving to be presented at the “National IT Security Research Conference 2025 - Cybersecurity and Democracy.”

Mr. Munoz always worked independently and reliably and was a very dependable partner for his supervisors. His documentation of work steps was always professional and precise. His specialized knowledge in IT and his excellent understanding of technical relationships are especially commendable. At all times, his performance received our fullest recognition. He consistently impressed with his cooperative, confident, and courteous demeanor. Collaboration with him was always very constructive.

The employment relationship ends with the expiration of the agreed period. It is particularly important to us to thank Mr. Munoz for his exceptionally valuable work at our institute. We greatly regret that we are unable to offer him a long-term career opportunity at this time following the completion of his studies. We wish him all the best and continued success for his future personal and professional life.

We would be pleased if Mr. Munoz would consider applying to us again in the future. We can highly recommend Mr. Munoz both professionally and personally.

Darmstadt, August 31, 2025
Fraunhofer Institute for Secure Information Technology

Dr. Morten Henkel
Head of Department CSS

Melanie Vogel
HR Representative