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STAS Nicolas

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Summary

Engineer and researcher focused on R&D for embedded systems and edge machine learning. Experienced in full-stack development of hardware, firmware, and ML models, including PCB design, custom test rigs, and on-device inference. Skilled at designing and running user studies to translate interaction data into engineering specifications and algorithm improvements. Former MIT Media Lab research affiliate with strengths in rapid prototyping, tooling for controlled-data collection, and cross-disciplinary problem solving for high-stakes applications.

Experience

Machine Learning R&D Engineer **Jul 2025**
QORVO
- Designed and conducted user studies to extract insights into engineering specifications.
- Developed internal test frameworks and electronics to collect controlled datasets for algorithm development and validation.

Research Affiliate **Jan 2025 - Jun 2025**
MIT, MEDIALAB, Responsive Environments
- Developed a sub-microsecond time synchronization protocol over UWB for distributed sensor networks.
- Designed a silent speech interface leveraging force sensors and deep neural networks for non-vocal communication.

Machine Learning R&D Internship **feb 2024 - aug 2024**
QORVO
- Conducted a comparative study of Cycle-GANs and adaptive filters for complex signal processing tasks, leading to a 30x improvement in SNR.
- Developed and validated a custom haptic driver with back EMF sensing and precision actuator control.

Machine Learning R&D Internship **avr 2023 - sep 2023**
QORVO
- Development of deep learning models for real-time embedded UWB radar data processing.
- Streamlining of ML workflow through tools, methodology and infrastructure improvements.

Robotics Engineer Freelance **sep 2021 - jun 2022**
Hive Robotics
Development of control architecture and power electronics for autonomous delivery robots.

R&D Internship **jun 2021 - sep 2021**
Vizzia
- Development of an embedded camera, with edge compute capabilities, for detection of illegal dumping.
- Deployment of back-end architecture for camera fleet and MLOps on AWS.

Projects Supervisor **2021 - 2022**
DaVinciBot, robotics club
Managed quality control, logistics, and coordination for 3 projects with 30 students.

Academic Projects

Creative AI Platform **sep 2023 - sep 2024**
MS Creative Technology (IFT)
Developed a creative AI pipeline using augmented reality for real-time character generation and manipulation.

Education

ESILV Paris, Graduate School of Engineering **sep 2018 - sep 2025**
- MS Creative Technology: computer science, deep learning, electronics, HCI
- Institue For Future Technologies (IFT): trans-disciplinary, disruptive and innovative laboratory

Skills

Hard Skills: PyTorch, TensorFlow, ROS, Python, C, C++
CAD: SolidWorks, Fusion360, KiCad, AltiumDesigner
Soft Skills: Design Thinking, Agile Development, Scrum, Waterfall