Jonas Dimitri Bohn

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I am passionate about solving complex challenges and developing data-driven solutions that drive efficiency and innovation. With a strong foundation in deep learning and data analytics, I focus on delivering practical, scalable solutions. Organized and collaborative, I excel in team settings and am committed to creating value and improving systems through strategic thinking and continuous learning.

Education

ETH Zurich - MSc. Robotics, Systems and Control *Sept. 2021 - Feb. 2025*
Master Thesis: Open Source AI-enabled Smart Inhaler for Asthmatic Patients **(Grade: 6/6)**

ETH Zurich - BSc. Mechanical Engineering *Sept. 2017 - Sept. 2022*
Bachelor Thesis: Automated vessel detection for fetal surgery **(Grade: 6/6)**

Work Experience

Digitec Galaxus AG - Junior Shop Structure Manager *Jun. 2021 - Mar. 2024*

- → Optimized the customer journey and product data of Switzerland's biggest e-commerce shop using Google Analytics, SQL, Tableau, and ERP tools.
- → Enhanced shop navigation through collaboration with internal stakeholders.
- → Developed data-driven insights (MySQL, BigQuery) to enhance user experience and increase engagement.

[Employment Reference (de)]

Digitec Galaxus AG - Customer Service Representative *Mar. 2020 - Jun. 2021*

- → Managed high-volume customer inquiries, ensuring a 95% satisfaction rate.
- → Trained existing employees in a new area of expertise, ensuring effective knowledge transfer and smooth adaptation to the new subject matter.

Digitec Galaxus AG - Data Entry Clerk Marketplace *Aug. 2016 - Jul. 2017*

- → Developed and optimized internal processes for the data processing of new marketplace suppliers, enhancing operational efficiency.
- → Represented the team in cross-functional company meetings, effectively communicating progress, challenges, and solutions.

[Employment Reference (de)]

Skills

Programming Languages: Python, SQL, Java, C++, Dart
Frameworks & Libraries: PyTorch, TensorFlow, Scikit-Learn, Flutter
Development & Tools: Git, Docker, Bash, Jira
Languages: Swiss-German (Native), English, French

Academic & Research Projects

Open Source AI-enabled Smart Inhaler [Project Page] Master Thesis
Supervision: Patrick Langer, Prof. E. Fleisch **Grade: 6/6**

- → Developed 3D-printed inhaler attachment & mobile app for clinical trials.
- → Successfully coordinated a clinical study at UKBB with patients, medical and scientific staff.
- → Collected & analyzed real-world patient data to evaluate ML algorithms for usage prediction.
- → Research currently under review for publication at UbiComp/ ISWC 2025.

Low-Power Object Detection for Challenging Conditions [Project Page] Semester Project
Supervision: Hanna Müller, Dr. Tommaso Polonelli, Prof. L. Benini **Grade: 5.75/6**

- → Optimized deep sensor fusion (depth + infrared) for embedded AI applications.
- → Accepted for demo at EMEA 2024. [Abstract]

Monocular Pose Estimation [Project Page] 3D Vision Project
Supervision: Dr. Hermann Blum, Weicai Ye **Grade: 5.75/6**

- → Developed a monocular pose-estimation algorithm to locate the Boston Dynamics Spot robot in a shared human-robot environment.
- → Created a NeRF-based synthetic image pipeline to generate training data.
- → Trained and deployed OnePose++ to estimate the robot's pose in real-world images.

Planning and Decision Making for Autonomous Robots [Course Page] Course Projects
Professor: Prof. E. Frazzoli **Grade: 5.75/6**

- → Solving optimization problems implementing algorithms as A*, Dijkstra, RRT.
- → Used Model Predictive Control (MPC) for autonomous vehicle guidance.

Automated Vessel Detection for Fetal Surgery [Project Page] Bachelor Thesis
Supervision: Dr. Jonas Lussi, Dr. Simone Gervasoni, Prof. B. Nelson **Grade: 6/6**

- → Created a new placental dataset for vessel segmentation in fetal surgery.
- → Implemented state-of-the-art segmentation networks using Keras (e.g., U-Net).
- → Fine-tuned models for optimal performance in segmenting medical images.

Robotic Arm for Sampling Lunar Regolith [Project Page] Studies on Mechatronics
Supervision: Dr. Hendrik Kolvenbach, Prof. M. Hutter **Grade: 6/6**

- → Designed and developed a robotic arm concept for sampling lunar regolith.
- → Presented findings to the R&D team at Airbus.