Luca Brusatin

mail@lucabrusatin.com | lucabrusatin.com

OBJECTIVE

Software engineer with team lead experience looking for opportunities to expand knowledge in new areas, own revenue generating projects, be part of the value-proposition of the company.

CORE SKILLS

- Production-grade software development (C, C++, Java)
- Data-driven analysis and modeling (Python)
- Project execution with small developer team

WORK EXPERIENCE

Senior System Software Engineer, Autonomous Vehicles   **2017 - present**
NVIDIA   Zurich, Switzerland
- Leading trajectory estimation group
    - Algorithm R&D for odometry, IMU, GNSS, radar, camera and lidar sensors
    - Project planning, coordination with internal stakeholders and external customers
- Developed various algorithms driving the cars today
    - Sensor fusion, probabilistic filtering, robust optimization for vehicle state estimation
    - System modeling and parameter optimization
    - Benchmarking framework evaluating the team's estimation accuracy, running on thousands of kilometers of real-world driving on a daily basis
- Contributor to NVIDIA's DriveWorks SDK
- Software development meeting ISO 26262 functional safety requirements

Research Associate   **2015 - 2017**
Tufts University, Human-Robot Interaction Laboratory   Medford (MA), U.S.
- Computer vision software for object detection and tracking
- Task planner for robots supporting concurrent execution and conflict resolution in multi-agent setting

Embedded Softare Engineer - Intern   **2014 - 2015**
senseFly   Lausanne, Switzerland
- State estimation for UAV, camera gimbal stabilization, fallback autopilot

EDUCATION

M.Sc. Microtechnique (Robotics and Autonomous Systems)   **2013 - 2015**
Ecole Polytechnique Federale de Lausanne (EPFL)   Lausanne, Switzerland
Relevant coursework: applied ML, image processing, distributed intelligent systems, robotics

Visiting Graduate Student   **2015**
Harvard University, School of Engineering and Applied Sciences   Cambridge (MA), U.S.
Master's Thesis: *Dispersion Algorithms on the Kilobot Robot Swarm*

B.Sc. Microtechnique   **2010 - 2013**
Ecole Polytechnique Federale de Lausanne (EPFL)   Lausanne, Switzerland
Relevant coursework: analysis, linear algebra, numerical analysis, probability and statistics, physics, signal processing

OTHER SKILLS

Tools and Libraries
- **C++:** Eigen, OpenCV, PCL, Ceres Solver, CUDA
- **Python:** NumPy, SciPy, Pandas, Scikit-learn

Languages: French, English, (Swiss) German
Interests: Astrophotography, Rowing