



Sebastian Baum

PhD Candidate

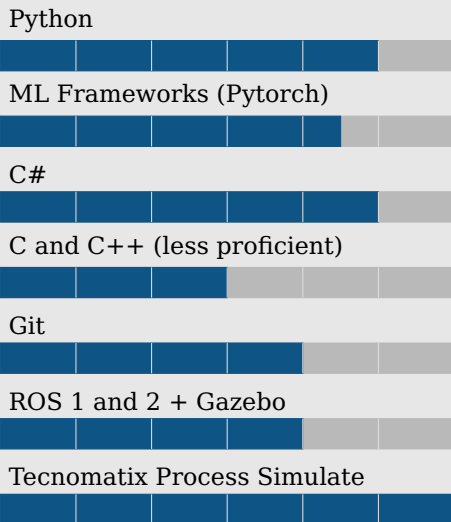
- 13. February 1997
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About me

If I had to describe myself in one word, it would be "enthusiastic". I am deeply passionate about scientific research and have dedicated my career to pursuing it, even when it meant taking risks and turning down more secure job opportunities. I have never regretted these decisions, as they have allowed me to pursue my scientific interests. My fascination with robotics and A.I. has been a constant theme, and I am excited by the endless opportunities that arise from the intersection of these two fields.

Skills



[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Education

- 2019-2022 M. Sc. Autonomous Systems (ToR, Certificate) University of Stuttgart**
Focus in robotics and A.I. (German Grade 1.5 | GPA 3.8/4.0).
 - Master thesis: "Targeted generation of necessary training data by generative neural networks." ([Abstract](#), [Code](#)).
 - Two practical projects:
 - Sensor fusion (combining of stereo and color camera) ([Report \[GER\]](#)).
 - Paper Elaboration : A theoretical evaluation of a paper in the „Explainable A.I.“-area ([Paper \[GER\]](#)).
- 2016-2019 B. Eng. Electrical Engineering (ToR, Certificate (GER)) DHBW Stuttgart**
Focus on automation and data science. Aroused my scientific curiosity with first scientific projects.

Experience

- 2022-today PhD Candidate University of Stuttgart - IAS**
Currently exploring physics-based A.I. and generative models. Curious about optimization, robotics, and A.I.
- 2019-2022 Robotic development (Job reference [GER]) Working Student at Festo SE & Co. KG**
Part of the "Application & Simulation" team and mainly concerned with the simulation-based optimisation of robot tasks.
- 2016-2019 Hardware engineering (Job reference [GER]) Dual Student at Siemens AG**
Worked in the fiber industry. I gained my initial experience in programming and automatic data processing..

Scientific Research

My scientific research areas are Robotics, Optimization, A.I. and anything that overlaps with these areas. In addition, I have a great interest in almost any subject, which is why I would not reject any subject in advance. I am currently working on two papers, that are related to my Master thesis.

Languages

- German (native)
- English (C1)
- French (basics)

Social Engagement

- Treffpunkt Adler - 71254 Ditzingen:** Teaching elderly people things about the internet and IT in general
- Arbeiterkinder e.V. - 70173 Stuttgart:** Meeting with younger academics in first generation (like myself) and talking about academic life.

Interests

I like to make music, hiking and cooking (enjoying a lot). Enjoying testing new robotics and artificial intelligence algorithms on ROS. Besides these hobbies, I used to live in an academic fraternity in Stuttgart, where I still with meet other members.