Minh Nguyen

Curriculum Vitae

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Education

2022–present **PhD candidate**, *Bielefeld University, Bonn-Rhein-Sieg University of Applied Sciences*
Topic: *Model-Based Instrumentation for Robotics Applications*

2015–2020 **Masters of Autonomous Systems (MSc)**, *Bonn-Rhein-Sieg University of Applied Sciences*, Sankt Augustin, *GPA – 1.7*

2009–2013 **Bachelor of Science in Computer Engineering (BSc)**, *Montana State University (MSU)*, Bozeman, MT, USA, *GPA – 1.3*
University Honors, Highest Distinction Degree
Senior Design Project: International RoboSub Competition by AUVSI Foundation

Master Thesis

Title *Knowledge-Enabled Specification of Composable Robot Motion Control Architectures*

Supervisors Prof. Dr. Nico Hochgeschwender & Prof. Dr. Paul Plöger & Sven Schneider

Masters Research and Development Project

Title *Learning Grasp Evaluation Models Using Synthetic 3D Object-Grasp Representations*

Supervisors Prof. Dr. Paul Plöger & Alex Mitrevski & Maximilian Schöbel

Experience

2024–present **Research Staff**, *University of Bremen*, Bremen
While continuing PhD research on automated robotic acceptance tests, I help with establishing the new Software Engineering for Cognitive Robots and Systems (SECORO) working group and contribute to the SOPRANO project.

2021–2023 **Research Staff**, *Hochschule Bonn-Rhein-Sieg*, Sankt Augustin
Together with others from Bonn-Rhein-Sieg University, we participate in the H2020 project Secure and Safe Multi-Robot Systems (SESAME), with the goal to model multi-robot scenarios in order to improve the transparency and evaluation of their executions. In this context, I investigate how knowledge about the system, e.g. hardware/software components or execution schedules, can be exploited to bridge the gap between abstract requirements from stakeholders and the concrete, executable tests carried out on the robots.

2020–2021 **Research Assistant**, *Hochschule Bonn-Rhein-Sieg*, Sankt Augustin
As part of my Master Thesis and in the context of the VeriComp project, I'm heavily involved in the development of two Domain-Specific Languages (DSL) for modeling robot motion control architectures (`algorithm-dsl` and `controller-dsl`). Models composed using these languages can be generated into C implementations, which has been integrated into full motion control schemes and successfully tested on the Kinova Gen3 manipulator.

2016–2023 **b-it-bots@Home member**, *Hochschule Bonn-Rhein-Sieg*, Sankt Augustin

- Develop the perception pipeline that bridges between Point Cloud Library (PCL) features in C++ with Machine Learning frameworks in Python.
- Write tutorials to help new members familiarize themselves with the team's software stack, especially the perception functionalities.
- Have practical experience working on the Toyota HSR, the Care-O-bot 3 equipped a KUKA Light Weight Robot arm (LWR), and the YouBot robot platforms.

2016–2018 **Software Developer Intern**, *Siemens AG*, Bonn

- Created an application to monitor, report, and download daily builds (C# .NET)
- Improved and implemented features for web reports of the project's development cycles (MVC ASP.NET)
- Began developing a new feature to learn from previous user commands to suggest next most probable ones.
- Wrote tests and implement functionalities to assess product performance (C++)

Awards

2017 **Deutschlandstipendium**

2013 **Award for Excellence**, *MSU Alumni Foundation and the Bozeman Area Chamber of Commerce*

2011–2013 Robert & Julia Noble Engineering Scholarship.

2011–2012 John & Mary Ellen Barr Scholarship

2010–2011 EMPower Scholarship

2009–2013 Freshman Achievement Scholarship

Extracurricular activities

2016–present Study Buddy program

2012–2013 **Vice President**, *IEEE Montana Student Chapter, MSU*

2011–2013 **Engineering Ambassador**, *College of Engineering, MSU*

2012–2013 **Treasurer**, *Eta Kappa Nu - Electrical and Computer Engr. Honors Society, MSU*

Technical Proficiency

Programming Languages	C++, Python, C#, MATLAB	Operating Systems	Debian based OS's, Arch Linux
Framework	ROS, MVC ASP.NET	Version Control	GIT, SVN

Languages

Vietnamese	Mothertongue	
English	Advanced	*Proficient for colleges in the USA*
German	Intermediate	*Basic conversations*

Interests

- Traveling
- Classical guitar
- Robotics
- Swimming
- Martial arts
- Table tennis