Pieter van Zutven

Personal and Contact Information

Name: Pieter van Zutven
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Employment History

11/2020 - present

Independent Software Engineer. *Rockbotics, Leerdam, Netherlands*
Responsibility: freelance software development.
Tasks: design of algorithms to measure and control motion of autonomous devices and machines, such as robots, vehicles and drones, algorithm implementation in software, integration on (embedded) hardware and experimental testing.
Skills: Matlab, Simulink, Stateflow, Embedded Coder, ROS, C, C++, Python

03/2017 - 10/2020

Software Engineer. *STIHL Tirol GmbH, Langkampfen, Austria*
Responsibility: development of robotic lawn mower software.
Tasks: design of localization, mapping, path planning and trajectory following algorithms for autonomous robot navigation, (embedded) software implementation, hardware selection and integration (gps, uwb, camera, imu and odometry), experimental testing.
Skills: Matlab, Simulink, Stateflow, Embedded Coder, ROS, C, C++, Python

11/2016 - 02/2017

Software Engineer. *Blue Sparrow GmbH, Innsbruck, Austria*
Responsibility: development of drone software.
Tasks: design of mathematical drone models, positioning controllers and trajectory generation algorithms, implementation of software, experimental testing.
Skills: Matlab, C++

04/2014 - 10/2016

Mechatronic Design Engineer. *Segula Technologies, Eindhoven, the Netherlands*
Responsibility: mechatronic design of high precision industrial systems (printers, scanners, lithography machines).
Tasks: mathematical modelling, (non)linear feedback and feedforward control design, system identification, parameter estimation, software development, hardware selection and integration, experimental validation.
Skills: Matlab, Simulink, SimMechanics, Embedded Coder, dSpace, xPC Target, ROS, C++, Python

10/2009 - 03/2014

PhD Researcher. *Eindhoven University of Technology, Faculty of Mechanical Engineering, Dynamics and Control Group, Eindhoven, the Netherlands.*
Responsibility: research and development of humanoid robots.
Tasks: mathematical modelling, system identification and control of humanoid robots, software development, hardware integration and experimental validation.
Skills: Matlab, ROS, C++, Python

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Education

10/2009 - 03/2014	**PhD Robotics**. *Eindhoven University of Technology, Faculty of Mechanical Engineering, Eindhoven, The Netherlands*. Graduated in 2014.

PhD thesis: Control and Identification of Bipedal Humanoid Robots: Stability Analysis and Experiments.

09/2006 - 09/2009 **MSc Dynamics and Control**. *Eindhoven University of Technology, Faculty of Mechanical Engineering, Eindhoven, The Netherlands*. Graduated in 2009.
MSc thesis: Modelling, Identification and Control of Humanoid Robots

09/2003 - 08/2006 **BSc Mechanical Engineering**. *Eindhoven University of Technology, Faculty of Mechanical Engineering, Eindhoven, The Netherlands*. Graduated in 2006.
BSc thesis: Scilab as an Alternative for Matlab

Additional Activities

09/2008 - 08/2013 **Team Leader of the RoboCup Humanoid Robot Team**. *Tech United Eindhoven.*
Responsible for the coordination of the team and for defining objectives, research direction, planning and task division.

06/2012 - 06/2013 **Organization Chair of the RoboCup Humanoid League**. *RoboCup.*
Responsible for affairs related to the organization and game play rule development of the humanoid league during RoboCup 2013.

Training, Courses and Certification

2015	**Working in Projects**. *Segula*
2015	**Human Engineering and Effective Communication**. *Saskia Slotboom*
2014	**Time Management**. *Een Helder Hoofd*
2014	**Simplify Software and Hardware Co-Design with MATLAB and Simulink**. *Mathworks*
2014	**Simplify Modelling and Simulation with MATLAB and Simulink**. *Mathworks*
2014	**Seminar Motion Control in the USA**. *MICE bv*
2009 - 2011	**PhD Course Program**. *Dutch Institute of Systems and Control (DISC)*
2011	**Scientific Integrity**. *TU/e*
2011	**Writing Articles and Abstracts in English**. *TU/e*
2010	**Supervising Master Students**. *TU/e*
2010	**Technology Entrepreneurship**. *TU/e*
2009	**Planning and Communication**. *TU/e*
2009	**C++ Course**. *TU/e*
2006	**Spanish for beginners**. *TU/e*

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Skills and Interests

Computer **C/C++, ROS, Matlab, Simulink, Stateflow, Javascript, HTML, CSS**. *Professional Level*
C#, Python, VBA, Visual Studio, Linux, xPC Target, dSpace. *Experienced Level*
PHP, NYCe 4000, Ethercat. *Intermediate Level*
VB.net, Java, Labview. *Basic Level*

Languages **Dutch**. *Native*, **English**, **German**. *Fluent*, **Spanish**, **French**. *Basic*

Interests **Sports**. Mountain Biking, Cycling, Hiking, Snowboarding, Skiing
Travelling. Photography
Reading. Novels, Technical and Scientific Magazines and Books