
Kevin Vogelzang

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Profile

Passionate, diligent and social engineer, who enjoys solving hard problems and getting involved while also making sure everyone is satisfied and on board. It is important to me to both have a challenge as well as a good team to tackle this challenge with. Currently over two years of experience in Control and Systems engineering with good customer satisfaction.

Education

University of Twente *Feb 2018 - Aug 2020*

MSc Systems & Control, cum laude (Specialization: Biomechanics)

Systems and Control is a multidisciplinary field focusing on the control of all kinds of technical systems. It combines knowledge of the mathematics of Systems and Control with specific knowledge of its applications (e.g. mechatronic systems).

University of Twente *Aug 2013 - Feb 2018*

BSc Creative Technology

Creative Technology is a study that combines multiple disciplines to allow for the creation of a complete product. Allowing the student to be familiar with the software and hardware as well as the design of the product.

Experience

Demcon Advanced Mechatronics - Enschede *Nov 2020 - Present*

Mechatronics Engineer (Junior) & Mechatronics Systems Engineer (Medior) - Medical

As a Mechatronics Engineer, my focus is on Control and Systems Engineering. This is done in one project with the goal to create a surgery grade medical device. The control aspect involves controller design, proofing safety and stability, supervision of other Control Engineers and testing. For System Engineering, I am involved in requirement definitions, client contact, concept documentation and failure mode analysis.

University of Twente *Jan 2020 - Aug 2020*

Graduation Project MSc Systems & Control (Final grade: 9)

The goal of the project was the development and evaluation of a safe fall controller for a lower limb exoskeleton using reinforcement learning. The implemented RL algorithm was a Soft Actor-Critic which acted upon a fall simulation. A wrapper around the simulation returned the observation and reward. The reward was based upon measures for a safe fall found in literature. Languages used: Python, XML.

University of Salford

Sep 2019 - Dec 2019

Associate Researcher - Internship (Final grade: 9)

The assignment was to create a proof of concept for a portable replacement for a motion capture system. Using a list of requirements, the GoPro video camera has been chosen as the preferred sensor. Computer vision techniques have been used to estimate the position of known patterns. The Newton-Raphson method was then used (among others) to estimate the 3D position and orientation. Language used: Matlab.

Study trip ExplorAsia

May 2017 - Oct 2018

Chairman Case Coordination Committee

The Case Coordination Committee was tasked with acquiring cases at companies, divide them among the participants and to make sure both the participants and the company are satisfied in order to finance the study trip.

University of Twente

Sep 2017 - July 2018

Student Assistant

Mathematics, Electronics and Control engineering.

P.K.v.V. Fact

Sep 2016 - Sep 2017

Vice-chairman

As the vice-chairman I was responsible for the improvements of the board on the topics of effectiveness and communication as well as for the communication towards the university.

University of Twente

Feb 2017 - Sep 2017

Graduation Project BSc Creative Technology (Final grade: 9.5)

The goal of this project was to create a unique application for the Myo armband, which is capable of measuring muscle activity in and movement of the lower arm. The chosen application, being a tennis trainer, was based upon the unique features and usability domains of the Myo. The final product was created using rapid prototyping and was able to map and visualize the movement and power of the tennis swing during a tennis match. Language used: C++.

Student Association AEGEE-Enschede

Sep 2015 - Sep 2016

Full-time Internal Affairs

As Internal Affairs at AEGEE-Enschede, I was responsible for the members of the association. Which means I had to make sure the members joined committees, participated in activities and enjoyed coming to our association.

Albert Heijn Bennekom

May 2011 - May 2014

General warehouse and inventory management.

Languages

Dutch: Mother tongue

English: Fluent

Skills

Programs: Matlab, Xcode, Visual Studio

Languages: Matlab and Simulink, Java, C++, C#, Python

Sports

Sailing (captain on small boats), Volleyball, Jogging, Snowboarding, Bouldering