# Jonas Schäfer

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## Education

**University of Birmingham**                                    **Birmingham, United Kingdom**

*Bachelor of Science (BSc) in Computer Science*                             *09/2018 – Present*
- Expected graduation in June 2021
- Current average of assessed work: **85%**
- First year Computer Science courses (20CP each): *Programming in Java, Mathematical Foundations, Artifical Intelligence, Data Structures & Algorithms, Logic & Computation*
- First year Widening Horizons Module - Astronomy (20CP): *The Cosmic Connection*

**Warndt-Gymnasium, Völklingen**                                    **Geislautern, Germany**

*Secondary School*                                                      *08/2010 – 07/2018*
- Graduated **Abitur 1.5** with examination subjects:
  English - 14, Mathematics - 13, Informatics - 12, Geography - 10, German - 13
- Honor received for **Year's best Informatics exam**

## Programming Projects

**Basic Maze Solver - Artificial Intelligence (Robotics) - 9/10**          *01/2019 - 02/2019*
- Building and coding a <u>LEGO EV3</u> robot with <u>Java leJOS</u> to use motors + light and distance sensors to follow a Maze system and avoid obstacles. It follows a line and detects different markings for various instructions.
- → Proven to lead my group under time pressure to great results and apply knowledge from many modules to the problem

**Maze Mapper - Data Structures & Algorithms - 100/100**                 *01/2019 - 02/2019*
- Implementing a *Drone* class that can move through an arbitrary *Maze* (consisting of chambers and connections between them) and maps it using various data structures and methods. At any point it can return (loop-less) to its origin.
- → Improved my programming capabilities by using more complex data structures and implementing an advanced project

**Genetic Algorithm(s) - Programming in Java - 100/100**                 *11/2018 - 12/2018*
- Designing an *Individual* representation as well as implementing an abstract genetic algorithm *GAApplication* class that can be specified into a *Binary Maximiser*, *Weasel* or *Maths* genetic algorithm.
- → Learned to properly use tools of Java as an Object-oriented programming language and how to design and adjust GAs

*Further projects, details and code can be found on my <u>GitHub repository</u>*

## Internship Experience

**Engineering Internship "IngFo" at Saarland University (2 weeks)**              *07/2015*
- Introduction to a wide range of Engineering fields (e.g. *Materials, Automation, Systems Engineering, Drive Technology*).
- → Gained insight into research and inner company workings of *HYDAC International GmbH & ZF Friedrichshafen AG* and enhanced my group working skills in both research and industry environments

## Extracurricular Activities

**Astronomy Talk**                                                              *03/2017*
- Advertising science subjects at the *Science night* of the Warndtgymnasium by explaining astronomic phenomenons
- → Demonstrated presentation skills and the ability to share enthusiasm for Science with others

## Skills & Interests

**Programming:** Java, Python (basic), C (basic)
**Markup:** LaTeX, Markdown
**Technologies / Tools:** Git, JUnit, Apache Log4j
**Languages:** German (native), English (fluent), French (advanced), Polish (basic)
**Interests:** Programming, Sciences (esp. Space-related), Music (esp. playing the guitar & piano), Languages, Travelling

*[References available on request - CV last updated as of March 7, 2019]*