

# DONALD PFAFFMANN

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## EXPERIENCE

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**Springer Nature Technology and Publishing Solutions [Java]** February 2019 - August 2019  
*Intern Pune, India*

- Implemented a feedback loop that increases the number of data samples for an existing machine learning algorithm. Data curation was the major challenge of this task. F-Measure of a model retrained on the newly available data improved by 16.83%.
- Implemented a Convolutional Neural Network (CNN) that classifies plain text (e-mails) into time related categories using a static word embedding model. Major challenges were implementing and testing proper techniques of data pre-processing and machine learning algorithms. Work on this module finished with the CNN classifier achieving a F-Measure of 85% and the provision of a Named Entity Recognizer, which is capable of extracting and normalizing time entities.

## PROJECTS

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*All mentioned projects are part of my curriculum at the University of Applied Sciences Kaiserslautern.*

**Mario-AI [Java], Grade: 1.0<sup>1</sup>** 2nd year

- Implemented an autonomous agent operating Mario through randomly generated levels by utilizing A\*-search in a team of two.
- The major challenge was coming up with a proper heuristic that maximizes the score of Mario.
- Placed third in an official competition held among all course members.

**Decentralized file transfer desktop application [Java, JavaFX], Grade: 1.0** 3rd year

- Developed a decentralized file transfer desktop application with a GUI in a team of two.
- Making the application highly error-resistant to loss of internet connection was the major challenge.

**Campusboard-App [Ionic, Angular, TypeScript], Grade: 1.0** 3rd year

- Contribution to the further development of the official mobile application of the university in a group of four.
- Familiarizing with existing code and learning TypeScript were the major challenges.
- Implemented the functionality of capturing present students in exams by scanning their student license with nfc in a team of two.

**DoublingBalls - Android mobile game [Java], Grade: 1.0** 2nd year

- Developed a *Run & Gun* game for Android smartphones in a team of two.
- Major challenges were internal state management and keeping multiple threads (visualization, calculation) synchronized.
- The resulting game could be published in the PlayStore as is.

## EDUCATION

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**University of Applied Sciences Kaiserslautern** *Zweibrücken, Germany*  
Pursuing B.Sc. in Applied Computer Science, **GPA: 1,4<sup>2</sup>** October 2016 - current

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<sup>1</sup> On a scale of 1-5 (university level), where 1 is the best grade; approximately equivalent to an "A" grade.

<sup>2</sup> Approximately equivalent to an overall "A-" grade.