

# KEVIN INNEREBNER BSC.



Data Science | Machine Learning | Compilers | Software Technology

## CONTACT

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🏠 <https://kev-inn.github.io>  
📱 @kev-inn  
in Kevin Innerebner

## EDUCATION

### 🎓 MSc. Computer Science

📅 09/2021 - ongoing  
📍 Graz University of Technology, Graz

### 🎓 Erasmus+ Student Exchange

📅 01/2022 - 05/2022  
📍 University of Jyväskylä, Jyväskylä  
Finland

### 🎓 BSc. Computer Science

📅 09/2018 - 10/2021  
📍 Graz University of Technology, Graz

## SKILLS

### Programming Languages

C, Python, Java, C#  
C++, R, SQL, Javascript  
Julia, Rust

### Software & Tools

Git  
Data handling/analysis  
(e.g. numpy, scipy, pandas, ...)

### Languages

German  
English

## HONOURS AND AWARDS

🏆 TU Graz 100 - Siemens Scholarship  
🏆 Dean's List 2022, 2020 & 2019  
<https://www.tugraz.at/fakultaeten/csbme/studies/deans-list/>  
🏆 CEOI 2018 - Team Austria  
<https://ceoi2018.pl/teams/>

## WORK HISTORY

### 📁 Research Assistant

📅 06/2022 - 07/2022  
📍 Graz University of Technology  
Continuation of Research Assistant position

### 📁 Tutor

📅 10/2019 - 07/2020  
📍 Graz University of Technology  
Teaching students **C** and **C++**.

### 📁 Research Assistant

📅 07/2019 - 12/2021  
📍 Graz University of Technology  
Work on various research projects. See [Projects](#).

## PROJECTS

### </> DAPHNE

📅 11/2020 - 07/2022  
📍 Graz University of Technology, Graz  
🌐 <https://daphne-eu.eu>  
📦 w/ MLIR, LLVM, C++, SIMD, ANTLR4

- MLIR-based compiler for **Data Analysis** and **Machine Learning** pipelines.
- EU-funded project with **13** members.
- Prototype and experimental feasibility study as **BSc. thesis**.
- <https://github.com/daphne-eu/daphne>
- See [Publications](#).

### </> ExDRa

📅 07/2019 - 07/2022  
📍 Graz University of Technology, Graz  
🌐 <https://www.exdra.de/>  
📦 w/ Spark, Hadoop, Java, Python

- Exploratory data science on **federated raw data**
- Shared project with **Siemens, TU Graz, DFKI** and **TU Berlin**
- See [Publications](#).

### </> SystemDS

📅 07/2019 - 07/2022  
📍 Graz University of Technology, Graz  
🌐 <https://systemds.apache.org/>  
📦 w/ Spark, Hadoop, Java, Python

- **ML system** for the end-to-end data science Lifecycle.
- Worked on various components (Federation, Tensors, Python-API, ...).
- <https://github.com/apache/systemds>
- See [Publications](#).

## PUBLICATIONS

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### Federated Data Preparation, Learning, and Debugging in Apache SystemDS

 S. Baunsgaard, M. Boehm, **K. Innerebner**, M. Kehayov, F. Lackner, O. Ovcharenko, A. Phani, T. Rieger, D. Weissteiner, S. B. Wrede

 2022      CIKM 2022

 [ACM DL](#)


### DAPHNE: An Open and Extensible System Infrastructure for Integrated Data Analysis Pipelines

 P. Damme, M. Birkenbach, C. Bitsakos, M. Boehm, P. Bonnet, F. Ciorba, M. Dokter, P. Dowgiallo, A. Eleliemy, C. Faerber, G. Goumas, D. Habich, N. Hedam, M. Hofer, W. Huang, **K. Innerebner**, V. Karakostas, R. Kern, T. Kosar, A. Krause, D. Krems, A. Laber, W. Lehner, E. Mier, M. Paradies, B. Peischl, G. Poerwawinata, S. Psomadakis, T. Rabl, P. Ratuszniak, P. Silva, N. Skuppin, A. Starzacher, B. Steinwender, I. Tolovski, P. Tözün, W. Ulatowski, Y. Wang, I. Wrosz, A. Zamuda, C. Zhang, X. X. Zhu

 2022      CIDR 2022

 [PDF](#)


### ExDRa: Exploratory Data Science on Federated Raw Data

 S. Baunsgaard, M. Boehm, A. Chaudhary, B. Derakhshan, S. Geißelsöder, P. Marian Grulich, M. Hildebrand, **K. Innerebner**, V. Markl, C. Neubauer, S. Osterburg, O. Ovcharenko, S. Redyuk, T. Rieger, A. R. Mahdiraji, S. B. Wrede, S. Zeuch

 2021      SIGMOD 2021

 [ACM DL](#)

### SystemDS: A Declarative Machine Learning System for the End-to-End Data Science Lifecycle

 M. Boehm, I. Antonov, S. Baunsgaard, M. Dokter, R. Ginthör, **K. Innerebner**, F. Klezin, S. Lindstaedt, A. Phani, B. Rath, B. Reinwald, S. Siddiqi, S. B. Wrede

 2020      CIDR 2020

 [arXiv](#)