Adrian Edward Thomas Henkel

80799 Munich, Germany
30.10.1998 | Nationality: German
LinkedIn: www.linkedin.com/in/adrian-henkel | GitHub: https://github.com/mainpyp

Education

Technical University Munich / Ludwig-Maximilians-University — **Munich, Germany**
Master of Science Bioinformatics — 2021 - now

Technical University Munich / Ludwig-Maximilians-University — **Munich, Germany**
Bachelor of science Bioinformatics — 2017 – 2021

- Thesis topic: Communication-efficient approaches for federated deep neural networks (grade 1.0)

Ludwig-Maximilians-University — **Munich, Germany**
Bachelor of science Statistics (minor CS) — 2016 – 2017

Professional Experience

Discovery Life Sciences Biomarker Services GmbH — **Munich / Kassel, Germany | Alabama, US**
Working Student — 2020 - now

- Proposing, planning, managing, and implementing a video tutorial series (~20 videos) of the image analysis software Visiopharm to increase productivity and to avoid recurring time-consuming trainings.
- Data visualization of produced clinical data with Python.
- Development, testing and validation of multiple GCP compliant Application Protocols (APPs) for Visiopharm.

AstraZeneca Computational Pathology — **Munich, Germany**
Working student — Mar. 2019 – Mar. 2020

- Planning and implementation of neural network with TensorFlow for segmentation of immunohistochemistry (IHC) tissue images.
- Analysis of different machine learning algorithms (NNs, RFs)
- Automation of training workflows with pytest and GitLab CI/CD tools.

Definiens AG — **Munich, Germany**
Intern — Mar. 2017

- Implementation of a three-dimensional data-visualization based on JavaScript charting and python data processing.
- Annotation of glomeruli and epithelial cells in IHC images.

Targos Molecular Biology GmbH — **Kassel, Germany**
Intern — Oct. 2016

Targos Molecular Biology GmbH — **Kassel, Germany**
Administrative Assistant — Jun. 2015 – Dec. 2016

Programming Projects

- **Advanced Masters Internship**
  Shiny application for survival analysis based on deconvoluted bulk RNA sequencing data. (deconvsurvR)
  (Ongoing and to be published)

- **Protein Prediction I**
  Detection of disordered post-translational modification with PyTorch
  (grade bonus – exam 1.3)
- **Protein Prediction II**
  Prediction of transmembrane classes directly from protein sequence embedding using the class-attention mechanism.
  https://github.com/mainpyp/cls-protein-prediction
  (grade bonus – exam 1.3)
- **Table inspector**
  Shiny application that allows a quick overview of the built-in data that comes with R.
  https://github.com/mainpyp/builtin_inspectoR
- **Masters Internship**
  Determination of expression signatures in macrophages using machine learning feature importance.
  (grade 1.7)
- **Bachelors Thesis**
  Communication-efficient approaches for Federated Deep Neural Networks. For the experiments I have used Tensorflow.
  https://https//github.com/mainpyp/ComEffgithub.com/mainpyp/ComEff
  (grade 1.0)
- **Problem Based Learning Seminar**
  Implementation of a Python based web framework to receive and rank scientific papers with Flask.
  https://github.com/mainpyp/paper-miner
  (grade 1.0)
- **Programming Internship & Genome-oriented Internship**
  (grade 1.3 & 2.0)

Extracurricular Activities (Or Other Experiences & Interests)

- Competitive basketball player at FC Bayern Basketball from 2013 - 2015. Played at national level in the Jugend-Basketball-Bundesliga (JBBL), won the German cup and ranked third in the Bundesliga in 2014.
- Coach at multiple youth basketball camps. (43 camp / Omari Knox Skill Camp)
- Volunteer as Basketball Instructor at DJK Würmtal from 2017 - 2021

Languages skills

German (Native); **English** (Advanced);

Computer Skills

Languages: **Python** (Advanced) • **R** (Intermediate) • **JavaScript – HTML - CSS** (Intermediate) • **Java** (Beginner)
Frameworks and Packages**: Pytorch (lightning) • TensorFlow - Keras • NumPy • Pandas • Flask • scikit-learn • Jupyter • Matplotlib - Seaborn • Plotly • pytest • Pillow**
Additional Skills: **Office 365 • iWork • Mac OS • Linux • JetBrain IDEs (DataSpell, PyCharm) • Conda • Git(Hub | Lab) • Bash**