

CURRICULUM VITAE

Mátyás Brindza

Personal Information

- Full name : Mátyás Brindza
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Education

- **Eötvös Lóránd University, Hungary (07/2019 – 07/2023)**

Department : Faculty of Science

Qualification : Physicist

Degree : Bachelor of Science (B.Sc.) in Physics

Thesis : Study of the Fringe Field of Canted Cosine Theta Superconducting Magnets

- Implementing additional functions to the C++ codebase that models arbitrary straight or curved CCT superconducting magnets and utilizes a third-party C++ software to calculate magnetic fields with high accuracy
- Investigating and comprehending the sources of defocusing field components in a dipole curved CCT magnet and effectively mitigating their impact on particle beam deflection by determining the optimal coil handedness
- Completely eliminating the undesired fringe field component by introducing a twist (around the magnet axis) to the winding geometry
- Introducing a method for improving space utilization through numerically determining the optimal winding density
- Introducing a method for tuning the magnet's length according to the integrated dipole field to achieve the desired beam deflection precisely

- **Bolyai Secondary Grammar School and Dormitory for Gifted Students, Serbia (07/2015 – 07/2019)**

Department : Mathematics

Degree : Secondary Grammar School

Thesis : The Main Principles of Operation of Heat Engines

- Introduction to thermodynamics and kinetic gas theory
 - Overview of the laws of thermodynamics, idealized thermodynamic processes and Carnot-cycles
 - Thermodynamic analysis of ideal heat engines
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Personal Skills & Attitudes

- Analytical
 - Fast learner
 - Problem solver
 - Open minded and enthusiastic about learning new concepts
 - Good communication skills, ability to collaborate across interdisciplinary teams
 - Passionate to learn about both management and product development
 - Able to perform under pressure and meet tight deadlines with determination
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Languages

Language	Speaking	Reading	Writing
Hungarian	First language	First language	First language
English	Fluent	Advanced	Advanced
Serbian	Conversational	Intermediate	Basic
German	Basic	Basic	Basic

Knowledge & Experience Summary

Programming Skills

- Python (Advanced)
- C++ (Advanced)
- LaTeX (Advanced)
- Bash (Intermediate)
- HTML (Intermediate)
- Pascal (Intermediate)
- C, Java, JavaScript (Beginner)

Tools & Technology Knowledge

- Microsoft Visual Studio Code (Intermediate)
 - NetBeans (Beginner)
 - CodeBlocks (Beginner)
 - GitHub (Intermediate)
 - Microsoft Office Word (Intermediate)
 - Microsoft Office Excel (Intermediate)
 - Microsoft Office PowerPoint (Intermediate)
 - Adobe Photoshop (Intermediate)
 - Adobe Premiere (Intermediate)
 - Paraview (Beginner)
 - AutoCAD (Beginner)
 - OS user experience : Linux, Android, Windows
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Job History

- **Twiner GmbH (02/2022 – 09/2022, 07/2023 - 12/2023)**

Position : Digital Annotator (Part-Time)

Tasks :

- Precisely outlining and documenting various types of damages to car surfaces to facilitate AI training, using COCO Annotator
- Utilizing the Kanban method to facilitate the flow of work across multiple teams
- Mastering the annotation platform and adapting to an evolving annotation guideline

- **Wigner Research Centre for Physics (09/2021 – 05/2023)**

Position : Thesis Research Intern (Part-Time)

Tasks :

- Entry-level participation in the ongoing research and development of particle accelerator technology employed in radiation therapy
 - Studying and utilizing relevant scientific articles
 - Collaborative experimentation and conceptualization of several potential improvements for Canted Cosine Theta (CCT) superconducting magnet designs
 - Collaborative development of an efficient solution to eliminate magnetic field impurities and introduction of other corrective methods for CCT magnets, which became the main focus of my B.Sc. thesis (details provided in the [Education](#) section)
 - Assistance with other scientific projects
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Hobbies

- Hiking
 - Socializing
 - Coding
 - Writing
 - Reading
 - Biking
 - Personal S.T.E.M. projects
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