

# Daniel Jakob

## Curriculum Vitae

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## Education

- 2021–2023 **Master's Mechanical Engineering**, *University College Dublin*, Award GPA: 3.34.  
Relevant Modules: Fluid Mechanics III, Process Control, Numerical Algorithms, Computational Continuum Mechanics II, Engineering Thermodynamics III,  
Dissertation: Optimising the Hybrid Operation Temperature Window of a Hybrid Heating System in the Irish Climate [GitHub].
- 2018–2021 **BSc. Mechanical Engineering**, *University College Dublin*, Award GPA: 3.66.  
Relevant Modules: Electrical Energy Systems, Applied Dynamics II, Mechanical Engineering Design II, Measurement & Instrumentation, Modelling & Simulation, Projects: Rotating Disc Electrodeposition Device with Ultrasonic Agitation design group project. Skills developed: CAD Skills, Presentation skills and animation/directing skills.
- 2012–2018 **Secondary School**, *Presentation College, Bray*, *Leaving Cert. Points – 543*.  
H1 – German, H2 – Design Communication Graphics, Physics, Geography.

## Experience

- Jan 2022 – **Engineering Intern**, JONES ENGINEERING, Intel Campus, Leixlip.  
Aug 2022 Aided tradesmen on-site by navigating the 3D Navisworks digital twin model of the Fab34 site. Created many tools to help the engineering team, in particular, a comprehensive search-engine-like tool and accompanying interface that merged data from four sources, significantly reducing time required to get info on a particular pipe/duct. Led a data-science-driven investigation into missing isometric drawing files, developing a large data model in PowerQuery and PowerBI.
- Jun 2021 – **Part-Time Waiter**, BOOMERANG BAR, Bray.  
Dec 2021 Part-time waitering staff at a family owned wet pub. Tasks included: serving drinks to customers, money collection, daily set-up and cleaning.
- Oct 2018 – **Part-Time Waiter**, LANA ASIAN STREET FOOD, Bray.  
Mar 2020 Created and developed an Excel spreadsheet which sped up end-of-day closing dramatically. Part-time waiter in an Asian/Thai food restaurant chain. Tasks included: waitering service, end-of-day cash register balancing, cleaning, coffee making, cashiering, taking in and signing off wholesale deliveries, dealing with customer complaints and on occasion, managing the floor. Shared a key to the premises with a fellow part-time waiter.
- Aug 2018 **Attendant**, HELL-&-BACK.  
Guided participants and supervisor for a weekend at Hell-&-Back as an attendant in the car park and the course.
- Jun 2017 **Attendant**, JUNIOR & LEAVING CERT.  
3 weeks worked as a Junior and Leaving Cert. attendant in Presentation College.

## Awards

- 2022 Safe Pass construction site permit
- 2021 IACT Working Safely For Employees in Pubs Cert. and Manual Handling Thoery
- 2018 Lifeguard Rescue Level 3 Award
- 2018 First Aid training course and BLS training
- 2017, 2018 5<sup>th</sup> and 6<sup>th</sup> year Academic Excellence in German
- 2017 Level 3 Kayaking Award
- 2016 Level 2 Diving Award
- 2013–2017 3× Spirit of Pres Award
- 2012–2018 3× Excellent Attendance Award

## Computer skills

- Basic JavaScript/JQuery, Adobe Photoshop, PHP, SQL, R, AHK, Docker, Python+Jupyter Notebooks
- Intermediate SolidWorks, Autodesk Inventor, HTML, CSS, Git, C & C++, (Arch) Linux, Power-Query+M-code, PowerBI, EnergyPlus
- Advanced L<sup>A</sup>T<sub>E</sub>X+friends, Excel+VBA, MATLAB, Modelica

## Communication Skills

- Video Editing Edited two short videos for college design projects.
- 3D Animation Created Autodesk Inventor animations of models with programmatic motions and driven assemblies.
- PowerPoint & Presenting Presented many small projects and dissertation to peers and professors.
- Technical Writing Wrote dozens of technical reports for college projects and my dissertation, including the creation of technical and complex, code-based programmatic diagrams.

## Languages

- English **Mother tongue**
- German **Proficient**
- Irish, French **Basic** *Basic words and phrases only*

## Interests

- Sea swimming
- Instant camera photography
- Skiing
- Backcountry hiking & camping