

# JAKUB SEKUŁA – CURRICULUM VITAE

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## EDUCATION

**University of Birmingham** – MEng Mechanical Engineering with Industrial Year 2017 – 2022

- **Final-year project title:** Development of a low-cost PIV/PTV system for in-process tracking of graphene production
- **Final grade:** First Class Honours

## WORK EXPERIENCE

**Mechanical Engineer** at Crux Product Design 2022 - current

- Carried out material research and testing for a new type of dry powder inhaler
- Led the development of a packaging innovation and standardisation project for a major pharma manufacturer
- Built a new company intranet application using Next.js, TailwindCSS, Strapi, and Mantine UI

**Web Developer** at Baba Ali 2021 - 2022

- Designed and developed websites for small business customers using WordPress and WooCommerce
- Created a custom e-commerce store for the company using Shopify, Liquid and custom JavaScript
- Assisted the director with streamlining and migrating business tools from in-house solutions to Shopify

**Student Placement R&D Engineer** at Aston Martin Formula 1 Team 2020 – 2021

- Designed 200+ machined and sheet metal parts and assemblies for motorsport using CATIA V6
- Produced 400+ engineering drawings incorporating GD&T and tolerance stack analysis for complex assemblies
- Reduced data processing time for thermal camera calibration by 80% by writing a custom VBA program
- Developed a custom torsion bar test rig which eliminated the need for hiring external testing facilities
- Assisted the development of a pit-stop simulator rig by modelling parts and preparing manufacturing drawings
- Worked with R&D and electronics engineers on developing and implementing a new tyre temperature sensor

**Co-founder** at MOSU Poland 2020 – 2021

- Co-founded a company providing environmentally friendly toothbrushes in a subscription model
- Created all brand visuals and marketing materials, such as social media adverts
- Responsible for company strategy and growing customer base to 50+ recurring monthly customers
- Managed sales, customer relations and marketing analytics using the Shopify platform

## FORMULA STUDENT

Formula Student is a global engineering challenge where university teams compete to build the best student-designed racing car.

**Mechanical Designer and Prototyping Lead** at UBRacing Formula Student team 2018 - 2020

- Designed and manufactured and tested in a wind tunnel a modular, 30% scale racing car model
- Machined car parts from aluminium using a lathe and a vertical milling machine
- Produced carbon fibre parts, prepared 3D-printed moulds and laid up carbon fibre

## SKILLS AND ABILITIES

**Technical:** Data Analysis, Technical Drawing, GD&T, 3D Printing, CNC Machining, FEA, sensing, motors

**Software:** SolidWorks, CATIA, MS Office, Git, Arduino, Raspberry Pi, Photoshop, Illustrator, Figma

**Programming:** Python, JavaScript, HTML/CSS, React, SQL, Node.js, Linux, Docker, REST API, Bash,

**Soft Skills:** Presentation, Teamwork, Communication, Report Writing, Analytical Thinking, Problem Solving

**Languages:** English (bilingual), Polish (native), German (intermediate)

## AWARDS AND CERTIFICATES

**MATLAB Fundamentals course** 2019

**Young Innovators' Prize - HEFI digital innovation boot camp** (3. place) 2019

**The Birmingham Project | Designing the future of transport** (1. place) 2018

## HOBBIES AND INTERESTS

- Frontend and backend web application development
- DIY electronics using microcontrollers and single board computers (Arduino, Raspberry Pi)
- Industrial design, UI/UX design, 3D modelling and 3D printing
- Photography and video production
- Weightlifting and swimming

## ADDITIONAL INFORMATION

- Full, clean driving licence and 7 years of driving experience