



Abhas Thakur **Materials Engineering Student**

Box-1389 2205 Lower Mall, Vancouver, BC, V6T1Z4

778-628-6681 | akabhaskr.ak@gmail.com|

<https://akabhaskrak.wixsite.com/abhasthakur>

TECHNICAL SKILLS

Software

- C-programming
- SolidWorks
- MS Office (Word, Excel, PowerPoint, etc.)
- VBA (Visual Basic for Applications) simulations
- Database design (MS Access)

Laboratory

- Designing, prototyping & simulations
- Materials & Metallurgical Lab Experience - electrochemistry, materials selection, polymer / ceramic / metal analysis, etching, mineral extraction, flotation, biomaterials
- 3D printing (FDM, SLA)

Licenses & Certifications

- CSWA¹ – Additive Manufacturing
- BC Class-5 Driver's License
- Red Cross Standard First-Aid Certification CPR-C & Advanced Wilderness First Aid

EDUCATION

University of British Columbia

May 2022

Bachelor of Applied Science - Materials Engineering

- **Completed all 2nd Year Mining & Metallurgical Engineering Electives**
- **Co-op availability- 4, 8, 12 or 16 month work term starting May 2020**

TECHNICAL WORK EXPERIENCE

National Metallurgical Laboratory (CSIR-NML), India
Intern at the Microstructural Engineering Lab

May, 2019 – July, 2019

- Literature review on “Grain Boundary Saturation through Sudden Plastic Deformation via High Pressure Torsion”
 - Conducted to help develop a procedure for testing the effect of HPT on Nickel’s grain boundaries
 - Hands-on work involved assisting graduate students with micro-hardness testing of the plastically deformed disks
- Experimentation and report on “Grain Size Distribution of Low-Alloy Steel Samples through Prior Austenite Grain Etching”
 - Performed following steps: sample preparation through grinding & polishing, etching, imaging, data analysis, reporting
 - Report is currently used as an internal SOP to assist other students with procedures and expectations of similar projects

Grind Chem Chemical Manufacturing, India
Software Consultant

May, 2015 – December, 2015

- Converted paper records for client orders into a fully-functioning and well-linked database in MS Access

TECHNICAL PROJECTS

Process Modelling for a Static and Dynamic Rotary Kiln, UBC
Modelling of Materials Processes

September, 2019 – December, 2019

- Ran VBA simulations in MS Excel for comparing projected values of a kiln with the given predictions

¹ CSWA stands for Certified SolidWorks Associate

- Applied principles of linear extrapolation and solving systems of differential equations by combining segments of Newtonian Interpolation & Bisection Methods, and Euler & Runge-Kutta 4th Order Extrapolation methods to calculate the required variables

**Process Modelling for Basic Oxygen Furnace (BOF), UBC
Thermodynamics of Materials I (Pyrometallurgy)**

January, 2018 – May, 2018

- Used MS Excel with various plug-ins to simulate steel-making in a basic-oxygen furnace (BOF)
- Gained valuable experience with bulk data analysis through this project

**Automated claws for miniature object retrieval, UBC
Intro to Engineering Design II**

February, 2017 – May, 2017

- Took responsibility of prototyping and manufacturing one claw
- Drew c-sketches and constructed a low-fidelity working prototype cardboard model version of the claw
- Coded an Arduino board with SONAR, Servo motors, and other attachments through C-programming
- Acquired experience with problem-solving via engineering methodology, with a focus on prototyping and modelling

OTHER EXPERIENCE

**WasteNauts Engineering Design Team, Vancouver, BC
VP Projects & Former Biomaterials Sub-team Lead**

September, 2019 – ongoing

- Managing multiple projects by coordinating with Project Sub-team Leads to ensure deadlines are being met; helping solve technical & logistical issues which cannot be solved by Sub-team Leads; member of the Team Executive Committee; executive authority on everything pertaining to projects management
- Acting as a liaison between upper management and technical specialists/leads
- Designed and spearheaded transition to new Matrix Organizational Structure (white paper document in progress) in order to boost accountability and transparency while setting up the Team to handle multiple projects per term
- Designed and spearheaded implementation of strict Project Selection Criteria through a Weighted Decision Matrix in order to quantitatively assess the merits of different ideas brought to WasteNauts before making the decision to move forward with them

**Starbucks UBC Tech-3 Bldg., Vancouver, BC
Barista**

September, 2018 – January, 2019

- Used to working in high-pressure, high-volume scenarios with ease
- Resolved customer conflicts and simple machine failures by troubleshooting and thinking on my feet
- Can make amazing espresso-based drinks

**UBC Access & Diversity, Vancouver, BC
Note-Taker**

September, 2018 – December, 2018

- Directly employed by UBC as a note-taker for students with accessibility needs for two of my engineering courses
- Delivered organized, detailed notes to the client in a timely manner and gained valuable experience in time-management

INTERESTS & ACTIVITIES

- Reading fiction and non-fiction novels, with some focus on ethical and philosophical debates
- Swimming, hiking, the outdoors
- Martial Arts (Jeet Kune Do, Judo, Krav Maga): Former member of the UBC Krav Maga Club
- Competitive sports: high-school basketball team captain; gold medalist in shot-put, tug-of-war