MATT STOKES - Vancouver, BC Canada

Passionate about **purpose-driven** deep-tech development. Main areas of research and exploration are problem-focused **robotics** and aerospace. **View Portfolio**

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EXPERIENCE

Next Decentrum Technologies Inc. - Vancouver, BC

Frontend/Web3 Developer
Contract - *5 months (Sept. 2022 - Jan. 2022)*
- ➔ Part of a 3-developer team tasked with **releasing** a SASS platform in **4 Months**.
- ➔ Worked with the CTO to break down the entire concept product into a **flow chart**, then **individual ticketed tasks** (with technical breakdown and **sudo-code**).
- ➔ **Architected** and **developed** SASS's entire **sign-up** and **login** process as well as individual account dynamic content retrieval system from the blockchain. Used **Javascript-**based frameworks, including **Next.js** and **Typescript**; styling through vanilla **CSS** and TailwindCSS, and **Cadence** for interacting with the Flow Blockchain (**learned** and became **proficient** within **two weeks**).

X: The Moonshot Company - Mountain View, California

Intern/Student
Sponsored Educational Experience - *3 months (Summer 2022)*
- ➔ Selected out of a pool of international applicants to participate in **3-months** of programming provided by **GoogleX**, culminating in a 2-week internship-style program on the **X campus.**
- ➔ Worked on the **Rapid Evaluation team** performing problem/solution analysis and engaging in rapid **R&D** in X's in-house **fabrication facility**. Ending the process with a V1 **physical product**.

TECHNICAL PROJECTS
- ➔ **Patch - Transdermal Hollow Body Microneedle Arrays for MDR Bacterial Infections**
  - ◆ Raised **$5k** in research **funding**
  - ◆ **Technical lead**, chief fundraiser and presenter for a small team of student researchers.
  - ◆ Developed a novel approach to **medicinal drug administration** utilizing **3D-printed** hollow-body **transdermal microneedle arrays** and pressurized drug packets.
  - ◆ I designed **six iterations** of the microneedle arrays (**Fusion 360**) using principles derived from independent research into microfluidics as well as an **interchangeable drug-packet** and **dispensing** system that was capable of dispensing entire packets of liquid at a **constant** and **predictable rate**.
- ➔ **Transradial Prosthetic Arm**
  - ◆ Raised over **$1k** in research funding
  - ◆ **Five years** of **experience** developing prosthetic arms, projects in order of completion include Elbow Actuated–non-powered prosthetic for children 9-13yrs; **ECG**, Powered Prosthetic less than $250; and **11-DOF** Myo-Electric Prosthetic.
  - ◆ Technologies include **Solidworks**, Fusion 360, **C++**, Python, **ROS2**, Arduino, Raspberry Pi, **3d Printing**.

EDUCATION

Honours Bachelors of Mechatronics Engineering
University of Waterloo, ON

2023-2028
Relevant Courses:
- ➔ MTE 121 (**C++, RobotC, ROS2**), MTE100 (**Solidworks**, Autocad, Drafting)

Alumni - prev. Innovate, Accelerate
The Knowledge Society
Relevant Projects:
- ➔ IKEA student consulting challenge, CAE student consulting challenge.

STUDENT DESIGN TEAMS

Waterloo Aerial Robotics Group
University of Waterloo Design Team
- - Mechanical Sub-Team
- - Used Solidworks to design a drone GoPro mount as skill-proof to join the WARG team.

SKILLS

Technical Software
- ➔ CAD: Fusion 360, **Solidworks**, Autocad
- ➔ Programming: **C++,** Typescript, **Javascript** (Next.js, React.js), vanilla CSS, **ROS2,** CMake
- ➔ Version Control: **git** + Github

Hardware and Techniques
- ➔ 3D Printing (DLP, SLA, **FDM**)
- ➔ Soldering
- ➔ Technical Freehand Drafting

Communication
- ➔ Technical Report Writing
- ➔ Experienced leader
- ➔ **Articles**
- ➔ Languages: English (Fluent), French (written)

OTHER LINKS

- ➔ **Portfolio Website**
- ➔ **Hobby 3D Printing Account**
- ➔ **Twitter**