Sebastian Czyrny

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Skills

Programming	C, C++, C#, Java, Python, Javascript
Web & Database	HTML & CSS, Bootstrap, SQL, MS SQL Management Studio, MongoDB
Frameworks	ASP.NET MVC Core (IIS), RESTful Interfaces, Entity Framework, Identity Framework, Git, AngularJS, ExpressJS, PyTorch, SciKit learn, Numpy, Springboot
Environments	Microsoft Visual Studio, Visual Studio Code, Netbeans, Eclipse, Windows, Linux

Work Experience

Sunnybrook Health Sciences Center, MyChart™ Program – *Student Web Application Developer*

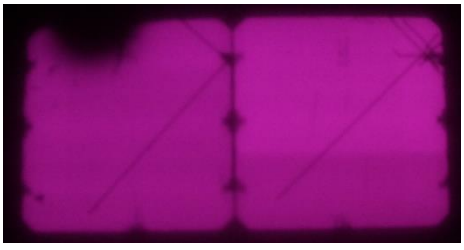
May 2022-Present

- **Learned** about computer programming (writing software applications in a multitude of programming languages), computer security (how to make websites secure), computer networks (making HTTP requests and handling HTTP responses), and software architecture (designing scalable and responsive software applications).
- **Gained** experience in all software development phases: inception, elaboration, construction, and transition.
- **Developed** and managed the front-end of a health care information services provider using Javascript, HTML & CSS, and AngularJS, as well as a back-end using Java Springboot framework, ColdFusion Web Development Suite, and connected with a Microsoft SQL Server
- **Collaborated** alongside a small team of senior software engineers and business anaylsts to design and integrate web pages into the MyChart application
- **Improved** usability through intuitive table filters and pagination, PDF viewing, and data load indicators
- **Communicated** progress on software development through daily meetings and Scrums

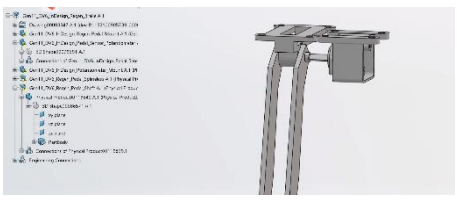
Design Teams

Blue Sky Solar Racing Team – *Array and Electromechanical Sub-Teams*

Oct 2021-July 2022



***Array*: Light curve tracing, Electroluminescent image rating algorithm** (Python). Designed a Python script to analyze and compare solar cells' data points' brightness. The analysis was run on image files producing picture brightness data. The analysis was used to optimize placement of solar cells on solar car such that the car receives a maximum power input. Python script was run under Windows OS, was built using the Python Image Library, and run & tested in Visual Studio Code.



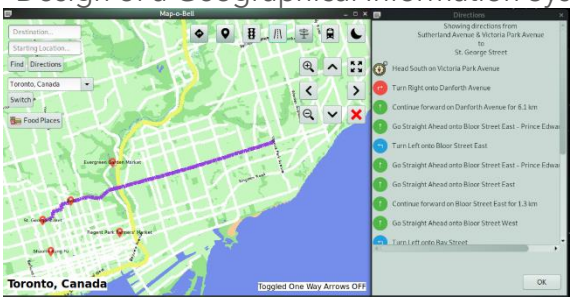
***Electromechanical*: design of regenerative-mechanical hybrid braking system** (CATIA). Utilized engineering software tool for Computer-Aided Design (CAD) for system modelling. Based on modelling, physical prototype was built and is undergoing rigorous testing.

Collaborative Experience

Team Leader, *Software Communication & Design*, U of T

Winter 2022

"Design of a Geographical Information System"



Collaborated in a team of 3 to build a geographical information system in C++. Open Street Maps was used for data retrieval. Front- End was built using GTK & EZGL graphics libraries. Application was run under Linux OS and run & tested in Visual Studio Code and Netbeans. Valgrind was used for memory checking. Path finding algorithm done using Dijkstra's and A*.

- **Designed** the architecture of the system to use the Model View Controller Design Pattern
- **Coordinated** team meetings and **delegated** tasks to team members.
- **Led** the building of the Front-End user interface using EZGL & GTK graphics libraries
- **Researched** design choices made in user interfaces to be user-friendly and responsive. Research sources include Jakob Nielson's *Usability Engineering* book, and an article by Seo, Daeil, Yoo, Byounghyun, and Ko, Heedong on Levels of Detail Modeling from the *International journal of geographical information science*

Team Leader, *Eng. Strategies and Practices II*, U of T

Winter 2021

"Design of a medical syringe and enteral feeding cleaning device"

- **Concluded** through prototyping that a motorized bottle brush serves as the best solution to cleaning syringes in a labour- and time-efficient manner
- Design was **determined** through structured brainstorming, drawing schematics of design ideas, and adapting upon existing technologies
- **Collaborated** with a team of 6 towards the design of a medical syringe cleaning device
- **Investigated** research topics are the precise applications of syringes in medicine, the current practices in handling the cleaning of syringes, manufacturers operating or selling syringes in Toronto, and medical standards behind the safe use and handling of syringes.
- **Prepared** meetings by organizing an agenda beforehand, and completed each task for the meetings
- **Coordinated** meetings by following pre-planned agenda, ensuring the participation of all team members, and initiating discussions, through the inquiry of team members' work status

Team Leader, *Eng. Strategies and Practices I*, U of T

Fall 2020

"Design of a product able to protect household habitants from unsupervised carbon monoxide (CO) emissions inside their garage"

- **Directed** and **researched** alongside team of 6 towards the design of a product able to protect household habitants from unsupervised CO emissions inside their garage
- **Analyzed** case study titled "Carbon Monoxide Exposure from a Vehicle in a Garage" by Dr. Thomas H. Greiner and Dr. Charles V. Schwab.
- **Partitioned** other research topics (why CO is deadly, effects of different CO levels on the human body, and CO removal methods) to team members, and recorded findings from research to Engineering Notebook. It was concluded that for the design to be successful and protect the habitants, it must not permit more than 10 ppm of CO inside house.

Education & Interests

University of Toronto

CGPA: 3.93

Bachelor of Applied Science: Computer Engineering

Expected Completion: April 2024

Interests

Front- & back-end web development, collaborative software projects, software design