# GUY D'MELLO

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## Education

**University of Toronto** **September 2019 – August 2024**
*Honours Bachelor of Science in Computer Science and Geographic Information Systems* *Toronto, Ontario*

### Relevant Coursework

- Web Programming
- Full Stack Development
- Data Structures
- Software Design
- Database Management
- Systems Programming
- Functional Programming
- Unit Testing

## Experience

**Application Developer** **May 2022 – August 2023**
*Government of Ontario – Ministry of Education* *Toronto, Ontario*

- **Led the development** of an onboarding application in partnership with Microsoft and the Ontario Public Service (OPS), recognized as the people's choice for its innovation.
- **Automated** applications (OSAP, CCLS, PARIS) with Visual Basic and Python, reducing manual data handling by **50%** and increasing test coverage by **30%**.
- **Configured Federated Authentication** using **Azure Active Directory**, enhancing security controls for **MongoDB** and improving identity management efficiency

**Business Analyst** **May 2021 – August 2021**
*Royal Bank of Canada (RBC)* *Toronto, Ontario*

- Led **development of Python and VBA solutions** for automation in personal and commercial banking, resulting in a **40%** increase in operational efficiency.
- Collaborated closely with the design team to ensure that software solutions met client expectations and **enhanced the overall user experience**, resulting in a **25%** improvement in user satisfaction ratings.
- Engaged with Senior Managers & Business Analysts to **gather and analyze** requirement specifications, **ensuring alignment with project objectives** and client needs.

## Projects

**Workplace Onboarding System** | *HTML, CSS, JavaScript, Microsoft Power Platform*

- **Led a team of 10+** in creating an application to intake and organize the onboarding process within multiple teams.
- Developed several UI prototypes to ensure **seamless user experience** and **accessibility**.
- **Increased** workflow **efficiency by 50%** by reducing unused time and **optimizing** user experience.
- Leveraged and collaborated with Microsoft to **deploy production** release in a **2-week timeframe**.

**Wordle Sync** | *React, Express, Fetch API, Web Sockets, jQuery, PostgreSQL*

- Developed "Wordle Sync," a **real-time**, WebSocket-enabled **multiplayer game**, using a **React-based** frontend for dynamic user interactions and responsive layout.
- Implemented **persistent data storage** with **PostgreSQL**, designing schemas for tracking user gameplay statistics and handling concurrent game sessions.
- Constructed a **Node.js backend** to manage game logic, WebSocket communications for state synchronization, and automated game cycling for continuous play.
- Integrated RESTful APIs and database transactions for user statistics retrieval, reinforcing the application's **full-stack capabilities** and **data integrity**.

**Discord Weather Bot** | *TypeScript, Discord.js, Node.js, Weather API, VS Code*

- Collaborated on developing a comprehensive **weather bot** for UofT's PyJaC Hackathon, utilizing **API integration** to provide real-time weather updates and forecasts, magnifying **user interaction** and utility.
- Implemented database functionality for historical weather data to enhance user engagement by **30%** and improve data retrieval speed by **25%**, providing personalized and **location-based** statistics in a practical format.

## Technical Skills

**Languages**: Python, Java, C, SQL, Visual Basic, HTML/CSS, JavaScript/TypeScript, R, Shell
**Web Development**: HTML5, CSS3, JavaScript (incl. ES6, AJAX, jQuery, React), PHP, Django, MVC architecture, CGI, Apache, Node.js
**Networking & Security**: TCP/IP, Ethernet, HTTP/HTTPS protocols, Cookies, Networking Security
**Libraries/Frameworks**: Ajax, Carto, Express, FortiWeb, JavaFX, jQuery, JUnit, Node.js, NumPy, PyTest, React
**Cloud Services/IDEs**: AWS, Azure, Google Cloud, CLion, Eclipse, IntelliJ, PyCharm, VS Code
**Databases**: MongoDB, PostgreSQL