# TEODOR ANDREI GEORGESCU

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## SUMMARY

A distinguished Computer Science and Health Information Science (HINF) student from the University of Victoria with a strong academic background. My proficiency in Python, Java, SQL, C, and Assembly languages coupled with a foundational understanding of hardware and electrical systems equips me with a holistic perspective on technology. The HINF background creates a basis of technical, medical, and administrative healthcare knowledge. Leadership qualities cultivated as a Taekwondo instructor further uniquely position me for internships in computer science or health information science.

## EDUCATION

**UNIVERSITY OF VICTORIA,** Victoria, Canada **May 2025**
**Bachelor of Science (BSc), Computer Science and Health Information Science**

- Current GPA is 3.85.
- $3,000 Entry scholarship.

**COURSERA,** Vancouver, Canada **June 2024**
**Meta Back-end Developer Professional Certificate**

## PROFESSIONAL EXPERIENCE

**ISLAND HEALTH AUTHORITY,** Victoria, Canada **May 2024 – August 2024**
**Clinical Application Analyst Co-op**

- Resolved over 1,200 account-related tickets, completing 25–30% of the team's monthly workload.
- Managed user accounts for clinical applications, including Paris, CareConnect, Vocera, TeleTracking, Strata Health Pathways, and Procura.
- Collaborated with team members to share knowledge and deliver effective solutions.
- Completed account management tasks quickly and accurately ensuring minimal delays in resolving user requests.
- Gained hands-on experience with tools such as Citrix Workspace and Windows Active Directory for seamless application access and management.

**TANTALUS SYSTEM CORPS,** Burnaby, Canada **August 2023 – April 2024**
**Co-op Hardware Test Engineer**

- Developed and automated Python and Bash scripts to streamline hardware testing, improving efficiency across multiple processes.
- Created a Bash script for WiFi module testing, reducing test time from 10 minutes per unit to 10 minutes for 8 units.
- Designed and implemented a Bash script for voltage and current accuracy testing, cutting test time from 2–2.5 hours per unit to 15 minutes.
- Conducted performance testing on RF (Radio Frequency) communication modules and identified signal sources using a signal analyzer.
- Performed fault diagnosis and component updates on PCBs (Printed Circuit Boards) to enhance hardware reliability.
- Analyzed test data using Python and Excel, producing automated reports with conditional formatting to identify discrepancies efficiently.

**(MCBRIDE) OMAC MASTERS TAEKWONDO,** New Westminster, Canada **May 2022 - August 2022, June 2021 - August 2021**
**Taekwondo instructor**

- Instructed various age groups, designed tailored lesson plans, and managed other instructors.

## SKILLS

**COMPUTER & TECHNICAL**

- **Programming Languages:** Python (+ Django), R, Java, SQL, C, Bash, Assembly, HTML, CSS, BASH
- **Networking:** HTTP/HTTPS, TCP/UDP, IP/ICMP, MAC, DNS , Socket programing, WireShark, Network Architecture
- **Artificial Intelligence:** Search algorithms, Probabilistic Reasoning (HMMs), Machine learning, Deep learning

- **Tools**: Git/GitHub, Microsoft Office, Slack, Minicom/Teraterm, Ubuntu, Jira, Confluence, Insomnia, Docker/DockerHub, Citric Workspace, Windows Active Directory
- **Electrical/Electronics:** Oscilloscopes, soldering tools, basic PCB Diagnostics, debug ports
- **Web Development**: Full-stack development with Django, API development, Docker containerization and deployment
- **System Analysis:** RFPs, Project Charters, Requirements Engineering/Modeling, Use Case Modeling, Data Modeling, BPMN Process Modeling, UI Modeling, Project management, UML

**Health Information Science**

- Proficient in managing and utilizing Electronic Health Records (EHRs), Electronic Medical Records (EMRs), and other healthcare IT systems.
- Skilled in database development, management, and usage for clinical and administrative applications.
- Experienced in data management and analysis, with a strong understanding of epidemiological concepts and methods.
- Solid foundation in medical terminology and clinical workflows to support effective healthcare IT solutions.
- Knowledgeable in procurement processes for evaluating and selecting healthcare systems and technologies.
- Expertise in change management strategies to implement and optimize healthcare IT solutions.

**GENERAL**

- Demonstrated leadership in small groups, fostering collaboration and achieving shared goals.
- Strong teamwork and communication skills, ensuring effective collaboration and clear exchanges of information.
- Skilled in problem solving with a logical and analytical approach to challenges.
- Quick learner, open-minded, and adaptable to new tools, technologies, and methodologies.
- Proven ability to multitask and manage multiple responsibilities efficiently.
- Strong work ethic, consistently delivering high quality results.

## PROJECTS

**DATA SHIELD MD, School project** **September 2024 - December 2024**

- Built a web application for secure data anonymization implementing K-Anonymity, L-Diversity, and T-Closeness algorithms to protect sensitive information.
- Designed user-friendly interfaces for managing datasets and user access.
- Automated data processing workflows, ensuring efficient file handling and privacy compliance.
- Deployed the application using Docker for scalability and seamless integration into different environments.

**NETWORK PROJECTS, School project** **September 2024 - December 2024**

- **Webserver Information Scraper**: Developed a Python-based tool to retrieve and display information about web servers. Gained hands-on experience with HTTP requests, response handling, and data parsing.
- **TCP Packet Analyzer**: Created a Python tool to analyze captured TCP packets, demonstrating a strong understanding of networking protocols and data extraction.
- **Traceroute Analyzer**: Developed an application to analyze traceroute captures, providing detailed insights into network paths and latencies, showcasing knowledge of ICMP and TTL mechanisms.

**AI PROJECTS, School project** **September 2024 - December 2024**

- **Search and Constraint Satisfaction**: Implemented search algorithms (random search, best-first search) and tackled constraint satisfaction problems, demonstrating problem-solving and algorithmic thinking.
- **Logical Reasoning**: Applied propositional and first-order logic to solve reasoning tasks, highlighting analytical and formalization skills.
- **Probabilistic Models**: Developed and used Hidden Markov Models for sequence prediction tasks, showcasing knowledge of probabilistic reasoning and temporal analysis.
- **Machine and Deep Learning**: Created machine learning and deep learning models for classification tasks, emphasizing data-driven solutions and model optimization.

**OPERATING SYSTEM PROJECTS, School project** **May 2023 - August 2023**

1. **Linux command piping (C):** Designed a program that can take up to four shell commands. Then execute commands sequentially transferring output of one command as input of the next. This program emulates piping present in Unix-systems.
2. **Thread synchronization (C):** Developed a concurrent program using POSIX threads to simulate the formation of an ethynyl radical (two carbons and one hydrogen atom). Synchronization challenges were addressed to ensure proper combination of threads into atoms. I implemented both a mutex and a semaphore solution.

3. **CPU process scheduling (C**): Created a program simulating a multi-level feedback queue scheduler. Three queues were present with decreasing priorities and increasing time quantum from most priority to least being 2, 4 and 8 seconds respectively. The scheduler also included a mechanism to prevent indefinite wait time in lower priority queues.
4. **Linux file system operations (C):**
    - **Stat:** Extracted and printed information about the fie systems superblock and FAT entries.
    - **Ls:** Imitated the "ls" command in Unix but also showed file size and creation date.
    - **Cat:** Imitated the "cat" command in Unix displaying file contents to the console.

**ASSEMBLY PROGRAMMING, School project** **January 2023 - April 2023**

All coding was done on ATMega2560 Arduino board provided by the school for a class.

- **Project 1**: Developed functions in assembly language to control LEDs on the Arduino board. When completed, one could push strings onto the stack and illuminate corresponding LEDs for each letter in the word.
- **Project 2**: Implemented assembly language program for the LCD display and buttons on the Arduino board. Upon completion, the bottom right indicated if a button was pressed or not while bottom left displayed the last pressed button. The up and down buttons allowed navigation through a string while left and right buttons shifted the LCD cursor on the top row, enabling string reiteration at any column.

**SMALL-SCALE ORACLE DATABASE APPLICATION, School project** **January 2023 - April 2023**

- Developed a small-scale application with a group.
- Built functionality including tables, triggers, authorization, and authentication schemes with SQL.
- Inserted logos, banners, and created page items for various display purposes.

**SENTENCE CONCORDANCE, School project** **September 2022 - December 2022**

Given a text file containing sentences and exclusion words it would generate an array of sentences, each with one capitalized word. If exclusion words were found in sentences, no version with that word capitalized was created. Sentences were aligned by capitalized words at the 30$^{th}$ column with character limits determining the number of words printed around the capitalized word.

- **C implementation (Dynamic):** Implemented a memory efficient program through dynamic programing techniques. Specifically, I used object-oriented programming to design a dynamic 2D-array structure.
- **Python implementation (Classes):** Leveraged Pythons object-oriented programming techniques with classes for code reusability and modular design.

## REFERENCES (CONTACT INFORMATION AVAILABLE UPON REQUEST)

**Rob De Angelis**
Hardware Product Development Director at Tantalus Systems

**Mark Fairburn**
Senior RF design Engineer at Tantalus Systems

**Chris Lowden**
Manager of General Clinical Services at Island Health

**Ben Tolson**
Application Analyst in General Clinical Services at Island Health