# Thomas Raczkowski

## EDUCATION

**Queens College, CUNY Flushing, NY**

*Bachelor of Arts in Mathematics, Minor: Computer Science (Major/Minor GPA: 3.64)* May 2019

**Relevant coursework:** IBM Artificial Intelligence in Chemicals, Petroleum, and Industrial Products, Advanced C++, Object Oriented Programming in Java, Algorithmic Problem Solving in C++, Design and Analysis of Algorithms, Cryptography, Theory of Computation, Linear Programming and Game Theory, Methods of Mathematical Statistics, Set Theory and Logic (graduate), Non-Euclidean Geometry (graduate), Theory of Graphs (graduate).

## TECHNICAL SKILLS

**Programming**: Python (Numpy, Pandas, Matplotlib, Tkinter, Selenium, Seaborn, Scikit-learn), Ruby (Nokogiri, Mechanize, SQLite3), Java, C++, HTML, CSS, Javascript

**Technologies**: Linux, Git/Github, SQLite3, Linux Shell Scripting, React, NodeRed, IBM Watson Knowledge Studio, IBM Watson Discovery, IBM Watson Assistant, Mural, Slack & Slack APIs, Telegram & Telegram APIs.

## RELEVANT EXPERIENCE

**The City College of New York NYC, NY**

*Undergraduate Researcher* Jan 2019 – May 2019

- Integrated Watson Assistant, Watson Knowledge Studio, and Watson Discovery Service into an app capable of delivering machine learning based conversational solutions to polyethylene plant managers.
- Worked as the back-end developer with an interdisciplinary team of engineers. Clearly communicated the possibilities and limitations of our technology stack to create business solutions for the Petrochemical industry.
- Increased back-end readability by 75% and team participation by 25% by utilizing NodeRed in the tech stack.
- Increased ease of access of using Watson Assistant by enabling end users to send their queries through Telegram.
- Helped plan and achieve business goals more efficiently by implementing AGILE practices within our team.

**Big Apple Dancesport Challenge NYC, NY**

*Registrar* Sep 2018 – Dec 2018

- Automated data migration process between remote and local data stores reducing time needed for this task from 40 man-hours per event to 5 man-hours per event using Ruby with Nokogiri and SQLITE3.

**Our Lady of Consolation RCC Brooklyn, NY**

*Music Director* Apr 2013 – present

- Wrote a daemon hosted on AWS that scraped a hymn recommendation website everyday and sent the contents as a text message to the organist using Python (with Requests and BeautifulSoup), the Twilio API, and cron.
- Utilized Python to write a hands-free, gesture-based counter powered by image processing and recognition libraries cv2 and dlib that decreased the amount of mistakes made by the organist during devotion service by 100%.

## PROJECTS

- Anki mass suspend – Increased ease of usage of shared Anki decks by decreasing time spent modifying decks using C++ to construct a database query letting you execute commands for all specified cards instead of one by one.
- Goal tracker – Created a web-page to track goal progress using HTML and JavaScript.
- Celebrity web scraper – Used Python with BeautifulSoup and Requests to scrape the Wikipedia articles of a provided list of famous people and export the accompanying text and images into a file format readable by Anki. This decreased the time needed to create such decks by 95%