Ronald Tourtellot
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EDUCATION

Rutgers University | New Brunswick, NJ September 2016 - May 2020

- Bachelor of Science in Computer Science (B.S.C.S.)
  - GPA: 3.22
- Minor in Psychology
  - GPA: 3.75

CODING EXPERIENCE: Java, Python, C, C#, C++, .NET, Unity, Swift iOS, Ruby on Rails, SQL, R

WORK EXPERIENCE

Mobile Application: Dog Runs Wild *Phillipsburg, NJ 08865* May 2019 - Present
Founder, Application Software Engineer / Developer, and Publisher

- Developed a side-scrolling, endless runner game in C#, available on the App Store and Google Play Store

Website Founder: www.GGTech.app *Phillipsburg, NJ 08865* June 2019 – April 2020
Co-Founder, Software Engineer / Developer, and Lead Designer

- Coded the website using the tools and algorithms I learned through my Internet Technology classes.
- Engineering solutions for key operations of the business, which sells electronics via the website.
- *Site operations Paused due to international shipping issues from the pandemic*

Oak and Steel Tree *1 Highlands Way, Phillipsburg, NJ 08865* May 2018 -August 2018
Tree Removal Specialist and Chainsaw Repairman

- Removal of trees, Maintenance and replacement of chainsaw parts, and transporting lumber

Advanced Stock Trading *Phillipsburg, NJ 08865* February 2016 - Present

- Options (Spreads, Iron Condors, Straddles) and Diversified Long-Term Dividend Portfolio

COMMUNITY SERVICE / VOLUNTEERING

Friendly Faces Program *Phillipsburg, NJ 08865* September 2008 – June 2017

- Contributed 40 hours per month to help students with disabilities become more social and independent
- Utilized my free period to tutor students with learning disabilities in math, science, and history helping them graduate on time. One student was 3 grade levels behind in Math and with my guidance we graduated high school in the same year
- Trained students in soft skills such as verbal & written communication, work ethic, positivity, and peer collaboration

CAMPUS INVOLVEMENT

Rutgers Competitive Rock Climbing Team September 2016 – May 2020

- As captain of the Rock Climbing Team, I directed practices and workouts. This is a leadership role with great responsibility for keeping the team on track to meet our goals each year (30 hours/week)
- Facilitated the planning for competitions from Rhode Island to Virginia
- Led Team as Captain as the top Rock Climbing Team in the Northeastern United States over West Point
- Led Team to Compete Nationally in Dallas in the 2018 Bouldering Finals

Computer Science and Math Tutoring September 2017 – May 2020

- Helped first and second year students with programming in Java and C languages, as well as Computer Algorithm Analysis. Tutored in technical skills and testing code, as well as teaching good documentation.
- Classes: Computer Science 111, Data Structures I & II, Calculus I & II

RELAVENT COURSEWORK

Computer Science 111	Data Structures I & II	Calculus AB & BC (AP)
Computer Architecture	Discrete Structures I & II	Internet Technology
Imaging and Multimedia	Linear Optimization	Intermediate Statistical Analysis
Scientific & Technical Writing	Systems Programming	Information Tech. & Informatics
Design & Analysis of Computer Algorithms		Principles of Programming Languages
Numerical Analysis of Computer Algorithms		

RELEVANT COLLEGE PROJECTS

Connect-4 Game With AI Opponent (Java) *Individual Project* **October 2016**

- In Java, I was given a project to code a GUI for a working Connect 4 game
- This required coding GUI itself, mechanics for playing the game between 2 real players, then coding the AI itself
- For the AI, I needed to create an array of values that determine which column produces the highest odds of victory

Solitaire (Java) *Individual Project* **February 2017**

- In Java, I was given a project to code an in-console version of Solitaire
- My job was to simply make an array on screen that held the values for the goal zones and card stacks, which update depending on the actions of the player.
- The player could perform all basic actions of the game of Solitaire

Defusing A Binary Bomb (C) *Individual Project* **October 2017**

- This was an entertaining project in C, where I was tasked with showing my expertise in debugging by using the GDB debugger tool to defuse bombs that go off in a program when it reaches certain points in the code.
- The idea here was to use breakout statements with the debugger tool to go line-by-line through the program and identify values of variables, see where they changed and what changed them, and then use that data to solve expressions in precise positions of code that I could not directly view.
- In total there were 10 bombs that went off in succession that needed to be defused.

Memory Cache Simulation (C) *Individual Project* **December 2017**

- I was tasked to create a cache simulator that reads a memory access trace file and simulates the effects of those memory operations on two caches.
- These caches were one prefetched, and one non-prefetched. (Prefetching being where the memory cache loads both the current and next memory block).
- I found prefetching is not recommended if the same element is accessed consistently because it would decrease hits. However, if the case will consistently test blocks around the current block, prefetching is recommended as it will increase the number of hits.
- I used an array of linked lists to represent the cache sets and each node of the linked list is a block within the cache. First I attained the index and converted it to a value, then found the set and traversed through the set, comparing the tags. If the tag matches, it is a hit. If it's a miss go into memory to load the current block for non-prefetch and both the current block and next block for with-prefetch

Optical Character Recognition - OCR (Python) *Individual Project* **April 2018**

- The task was to use Python to build an OCR system for hand-written characters as a proof of concept for binary image analysis.
- I implemented this through binarization modeling of characters that can read an image file and then visualizing it in a binary matrix. I then extracted characters and their features, removed small components to avoid impurities, then matched these to a set of data trained into the program to recognize characters correctly.

File Compression System (C) *Individual Project* **November 2019**

- I was tasked to be able to programmatically traverse through a file system and find/open any file in it.
- Then, I learned to compress these files by reading them and use a Huffman Code sorting algorithm to compress the data in the file into a binary number based on frequency of word nodes in the Huffman tree.

IP Network (Python) *4-Person Project* **February 2020**

- In this project, I created an IP network consisting of hosts that connect to a router, through virtual machines.
- The network functions with full end-to-end connectivity that can send messages from host to host through the router, measuring ping an logging connections.

Experience Coding in: Java, Python, C, C++, C#, Unity, Swift iOS, Ruby on Rails, R
Technologies Experience: React, Command Line, Visual Studio, XCode, Solidworks, Git