Bryan F. Ritter

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| CERTIFICATIONS | * [CompTIA Linux+ Powered By LPI Certified](https://www.certmetrics.com/comptia/public/transcript.aspx?transcript=NT2H6CL22FR4QE36), (2018-Apr) * [LPIC-1 Certified](http://cs.lpi.org/caf/Xamman/certification/verify/LPI000397998/vlblzawygu) (2018-Apr) |
|  | * **Coursera “Logic: Language and Information** [**1**](https://www.coursera.org/account/accomplishments/certificate/EL4LBKX7JE) **and** [**2**](https://www.coursera.org/account/accomplishments/certificate/YZDZZ7CKVC)by The University of Melbourne on Coursera Certificate |
| JOB EXPERINECE | * **Software Engineer,** [**HCL America**](https://www.hcl.com/) * Implemented and verified document changes within DOORS database and C code * Organized DOORS database documentation into MS Excel spreadsheets * **Teacher’s Assistant/Grader,** [**UNCC**](https://www.uncc.edu/) * Ran C++ student lab class sessions * Assisted students’ with their questions about C++ and logic, in person and email * Graded tests and programming projects * **Mathematics Tutor,** [**CPCC**](https://www.cpcc.edu/) * Helped students learn how to use calculators, and work math problems (from basic math to calculus) |
| [COLLEGE DEGREES](http://bryanfritt.host2go.net/" \l "Credentials) | * [**B.S. Computer Science**](http://bryanfritt.host2go.net/Bryan_Ritter-UNCC_Diploma-535x420.jpg) **with Mathematics Minor, UNCC** * [**A.A.S. Computer Technology Integration**](http://bryanfritt.host2go.net/Bryan_Ritter-CPCC_Credentials_Awarded.png)**, CPCC** * [**A.S. Engineering Pre-Major**](http://bryanfritt.host2go.net/Bryan_Ritter-CPCC_Credentials_Awarded.png)**, CPCC** |
| CLASS PROJECTS | * **Logic and Computer Systems**, ITCS 3181 * Used [Mentor Graphics DxDesigner](http://www.mentor.com/pcb/xpedition/engineer/) to create circuit schematics such as 4 bit adder/subtracter, [ALU](http://en.wikipedia.org/wiki/Arithmetic_logic_unit), 4 bit Shifter, 3-var mux, 4 bit by 4 bit multiplier, and [flip flops](http://en.wikipedia.org/wiki/Flip-flop_(electronics)), etc... * Created Assembly programs such as a multiplier, and prime number lister. Highest grade of the class on final exam |
|  | * **Symbolic Programming**, ITCS 3152   + Worked as a team of 5 people to create a functioning game like '[Bejeweled](http://www.popcap.com/games/bejeweled2/online)' using the '[lisp](http://en.wikipedia.org/wiki/Lisp_(programming_language))' programming language   + Wrote functions that checks for and handle matches that user moves would make |
|  | * **Operating Systems and Networking**, ITCS 3146 * Created a a '[Job Scheduling Simulator](http://en.wikipedia.org/wiki/Scheduling_(computing))' in Java that shows job performance data such a turn around time, wait time; per job/average, etc... for FCFS (first come first serve), SJN (Shortest Job Next), SRT (Shortest Remaining Time), and RR (Round Robin) |
|  | * **Operating Systems**, ITCS 3143 * Created a Java program that if given a 'claim matrix' an 'accumulator matrix' and a 'reserves vector' from a file determine if this would create a 'safe state' using the '[Banker's Algorithm](http://en.wikipedia.org/wiki/Banker's_algorithm)' |
|  | * **Digital Image Processing**, ITCS 3134 * Worked with a partner to create a [MatLab](http://www.mathworks.com/products/matlab/) program that could take video and replace one object with another image |
| ALGORITHMS  STUDIED | * **Graph Theory**: [Prim's algorithm](http://en.wikipedia.org/wiki/Prim's_algorithm), [Kruskal's algorithm](http://en.wikipedia.org/wiki/Kruskal's_algorithm), [Dijkstra's algorithm](http://en.wikipedia.org/wiki/Dijkstra's_algorithm), [Floyd-Warshall algorithm](http://en.wikipedia.org/wiki/Floyd–Warshall_algorithm), * **Search**: [Breath First Search](http://en.wikipedia.org/wiki/Breadth-first_search), [Depth First Search](http://en.wikipedia.org/wiki/Depth-first_search), [Binary Search Algorithm](http://en.wikipedia.org/wiki/Binary_search_algorithm), * **Sorting**: [Bubble Sort](http://en.wikipedia.org/wiki/Bubble_sort), [Insertion Sort](http://en.wikipedia.org/wiki/Insertion_sort), [Merge Sort](http://en.wikipedia.org/wiki/Merge_sort), [Sorting by Counting](https://www.youtube.com/watch?v=_q0OOXo4l7E), [Selection Sort](http://en.wikipedia.org/wiki/Selection_sort), [Heap Sort](http://www.personal.kent.edu/~rmuhamma/Algorithms/MyAlgorithms/Sorting/heapSort.htm), [Quick Sort](http://en.wikipedia.org/wiki/Quicksort), [Radix Sort](http://en.wikipedia.org/wiki/Radix_sort), [Bucket Sort](http://en.wikipedia.org/wiki/Bucket_sort), * **Trees**: [AVL Trees](http://www.mathcs.emory.edu/~cheung/Courses/323/Syllabus/Trees/), [B\*Trees](http://en.wikipedia.org/wiki/B*), [B+Trees](http://en.wikipedia.org/wiki/B+_tree), [2-3-4 Trees](http://en.wikipedia.org/wiki/2–3–4_tree), [Red Black Trees](http://en.wikipedia.org/wiki/Red–black_tree) |
| LINUX BASH & SH SCRIPTS | * Self Studied the [Advanced Bash Scripting guide](http://tldp.org/LDP/abs/html/), Chapters 1-38, and more * Scripts that mount drives no matter if they were local or remote * Scripts that call functions to move and resize windows * Script that will run fan at full speed on suspend until a temperature is reached, or for a certain amount of time * Scripts convert characters typed as DVORAK in a QWERTY keyboard, and vice versa * Scripts that mount iso files in common directory * A startup script that startup applications based on what session was logged into, and what was already running * A script that would back up files upon log out, if external HDD is mounted * A script that would put the MD5, or SHA1 checksums of every file in a folder and it’s subdirectories, and does this for every subdirectory, while only calculating the MD5, SHA checksum once for every file * A script that changes symbolic links that have '\' to '/' only if it would make it point to a file, backing up the symbolic link first |
| OPEN SOURCE EDITING | * Modified Compiz source [code](https://code.launchpad.net/~bryanfritt/compiz/more_ezoom_and_100percent_grid) so that the eZoom plug-in has more ‘Specific Zoom’ levels * Modified Compiz source [code](https://bugs.launchpad.net/compiz/+bug/1591737) so the Grid plug-in has 100% in its cycle * Modified KOrganizer source code so that it’s ‘agenda’ view would go in 5 minute increments |
| TI-BASIC PROGRAMS | * Function that calculates the '[critical points](http://en.wikipedia.org/wiki/Critical_point_(mathematics))' of a function, [unit vector](http://en.wikipedia.org/wiki/Unit_vector) of a given vector, [area between curves](http://tutorial.math.lamar.edu/Classes/CalcI/AreaBetweenCurves.aspx), [TNB](http://en.wikipedia.org/wiki/Frenet–Serret_formulas) frame vectors, etc... * Functions that can input numbers with their +/- accuracy, and add, subtract, multiply, and/or divide them, and produce the result with the final +/- accuracy |
| ORACLE / SQL / JAVA | * Created a Java GUI that calls functions that connect to, query and/or modify a [SQL](http://en.wikipedia.org/wiki/SQL) database that I designed, and created |
| BUG REPORTS | * Reported several bugs to such sites as [launchpad.net](https://launchpad.net/~bryanfritt), and [bugs.kde.org](https://bugs.kde.org/buglist.cgi?bug_status=UNCONFIRMED&bug_status=CONFIRMED&bug_status=ASSIGNED&bug_status=REOPENED&bug_status=RESOLVED&bug_status=NEEDSINFO&bug_status=VERIFIED&bug_status=CLOSED&email1=BryanFRitt@HotMail.com&email2=BryanFRitt@HotMail.com&email3=BryanFRitt@HotMail.com&emailassigned_to1=1&emailassigned_to2=1&emailassigned_to3=1&emailcc1=1&emailcc2=1&emailcc3=1&emaillongdesc1=1&emaillongdesc2=1&emaillongdesc3=1&emailreporter1=1&emailreporter2=1&emailreporter3=1&emailtype1=substring&emailtype2=substring&emailtype3=substring&list_id=1123309&order=Importance&query_format=advanced), etc… |
| WEB PAGE | * Self studied web basics on [w3schools.com](http://www.w3schools.com/)  HTML, CSS, JavaScript, PHP, JQuery, XML, SVG (I already knew SQL) * Created and hosted my own homepage with my resume, cv, and some sample programs I’ve created:   <http://bryanritter.host2go.net/> |
| SKILLS & ABILITIES | * **Programming Languages:**  BASH/SH, JAVA, C++, PYTHON, SQL, HTML * **Mathematics Software:**  Mathematica, Maple, Ti-Basic * **IDE:**  Eclipse, Code::Blocks, LiClipse * **Operating Systems:**   Linux(Debian, Ubuntu, …), Windows(10, 7, XP, …) * **Virtualization:**  VirtualBox, VMware * **Office Suites:**  LibreOffice, MS Office |
| NOTE | * *My knowledge of things listed in this CV are at least at the point where, if given a brief time to do a quick review, I could explain it.* |