Jucain Eugene Butler
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EDUCATION

M.S., Computer Science & Engineering, University of Notre Dame, May 2002. GPA 3.4

B.S., Computer Science, University of the District of Columbia, May 1997. GPA 3.6

EMPLOYMENT HISTORY

12/2007 – present *Computer Scientist* **Dept. of Defense, Defense Info Systems Agency (DISA)**

Research and develop applications for the Privilege Management branch which is concerned with access control of resources on the DoD network. These duties included researching various paradigms of authentication and authorization techniques and protocols. I manage the test and development lab where access control applications are developed and tested. Develop and designed techniques and strategies for Knowledge management using Enterprise Sharepoint and various websites. Manage the Bootable Media program – an application that allows DoD employees to securely access the DoD network from a personal computer.

2/2007 – 10/2007 *Software Developer* **Caliper, Inc.**

Developed and managed an application that scanned, sorted, and captured data from military records for the U.S. Army's physical disabilities program. Using Kofax's Ascent Capture, Xtrata, Virtual ReScan Pro, MSDOS programming and Visual Basic, this application allowed operators to scan official military documents where they were automatically identified by form, sent to a Quality Control module for inspection, moved to a OCR module where data was captured from the documents, and sent to a Validation module which allowed the operators to correct any data capture error. The Release module then stored the meta data and document images to the hard drive. I wrote a MSDOS program to bundle the meta data and images into a zip file to be uploaded into a Java based application.

11/2005 – 5/2006 *Database Administrator* **YellowHouse Associates**

Responsible for administering, backing up and testing the Criminal Arrest and Investigations database of the DC Metropolitan Police Department using Microsoft Sql Server 2000. Also created and ran scripts to clean and ensure the integrity of the data.

Other routine duties included restarting the system, testing newly developed and already developed web applications, and working directly with officers, detectives and civilian employees who had problems using the database.

10/2004 – 8/2005
Programmer/Analyst **Next Century Corporation**

Developed portions of a major software application called Threat Warning System for the U.S. Army using Java Swing in the Eclipse IDE. I wrote the code for the portion of the application that allowed users to create and display a list of missions that each had related map and other special files. The application allowed users to click on the mission and access all the other files related to that mission. Clicking on the maps tab would display a list of maps, and the user could click to add, delete, or display the map. Clicking on another link allowed the user to add, edit, delete or display two other special interest files. I also worked on several smaller Java Swing programming assignments.

Additional duties included testing a software application called Electronic Deck Log for the U.S. Navy using the Quality First testing application; reporting bugs in the code; making recommendations to the programmers to enhance the application; editing, formatting and compiling an XML file that was integral to the Threat Warning software application. Also, wrote and delivered to the client a test plan, in addition to an automated test that tested a significant portion of the application.

8/2002 – 8/2004 Sr. *Research Technician* **University of Notre Dame, Computer Science Dept.**

Developed, created and implemented web-based learning tools for use in an Introduction to Engineering course that introduced computer science, chemical, and electrical engineering concepts to first-year engineering students by simulating systems in their respective fields. The learning tools were created in the Java programming language using the complete software engineering life-cycle, HTML to design the web page and reference materials, and WebCT to administer the assessment tools. Several smaller demonstration applets were developed to demonstrate basic engineering concepts. Also wrote smaller Java Applets that demonstrated several introductory programming concepts such as sorting, insertion, merging, and recursion.

8/1999 – 8/2002 *Research Assistant* **University of Notre Dame, Computer Science Dept.**

Created, constructed and implemented a web-based learning tool for use in an Introduction to Engineering course that introduced computer concepts to first year engineering students by simulating a simple computer based on the Lego RCX programmable brick. The learning tool was created by using Java to simulate the RCX processor, HTML to design the web page and reference materials, and WebCT to administer the surveys and quizzes.

8/1997 – 8/1999 *Teaching Assistant* **University of Notre Dame, Computer Science Dept.**

As one of the instructors for the first year engineering course, taught two sections of introduction to computer programming. One course was taught using Fortran and the other was taught using the C programming language.

1990 – 1997 *Office Automation Specialist* **Department of Agriculture, Washington DC**

Operated and maintained the office automation equipment for the Office of the General Counsel. I trained attorneys and support staff in the use of the department's computer programs and equipment, as well as programs and equipment of our primary client, the Forest Service. I created a database to track legal cases. I also assisted office personal whenever they had trouble using a program or if the equipment malfunctioned.

OTHER WORK EXPERIENCE

2009 – Present *Instructor/Presenter* **Self Employed/Volunteer**

As part of my passion for introducing, encouraging and teaching kids about S.T.E.M.-based education, I teach kids how to design, build and program autonomous robots using the LEGO Mindstorms N.X.T. and EV3 systems. I have conducted classes for the DISA Discover program, the Patriots TTC S.T.E.M. program, the Metro Warrior S.T.E.M., the Hayden Academy, and the Washington Nationals Baseball Youth Academy. I also visit local schools during Career day and give presentations about Computer Science and Engineering. Last year I became the Co-Coordinator for the Patriots Lego Engineering program where I taught 50+ students, coaches, and parents Lego EV3 computer programming and robot design. For the last two years I have coached a team of students in the Patriots Solar System competition where we studied and researched human exploration on Mars.

1997 - 2001 *Instructor/Presenter* **Notre Dame Minority Engineering Outreach Program**

As part of a series of courses designed to introduce engineering concepts and disciplines to minority, middle school students created and taught a course about the theory, design and programming of robots.

PUBLICATIONS

"*A Web-base Learning Tool that Introduces Engineering Concepts by Simulating a Chemical Reactor*" Proceedings of the 2003 ASEE Annual Conference and Exposition.

"*A Web-base Learning Tool on Microprocessor Fundamentals for a First-Year Engineering Course*" Proceedings of the 2003 ASEE Annual Conference and Exposition.

"*A Web-based Learning Tool that Simulates a Simple Computer Architecture*" ACM, SIGCSE Bulletin -- Inroads , June 2001 volume 33, number 2.

HIGHLIGHTS OF QUALIFICATIONS

- Highly inquisitive, creative and resourceful
- Excellent skills in communication and collaboration
- Skilled in many areas of Computer Science
- Excited by the challenge of research and application

COMPUTER EXPERIENCE

Languages: Java, C, C++, HTML, Pascal, NotQuiteC, Basic, XML, Javascript
Operating Systems: Unix, Microsoft Windows
Software Packages: Eclipse, LEDA, Matlab, Ant, LAM/MPI (message Passing interface), WebCT, Latex, Word, Wordperfect, Excel, Access, Power Point, SQL, Tomcat

MEMBERSHIPS

- National Society of Black Engineers
- Association for Computing Machinery
- ACM, Special Interest Group – Computer Science Education
- Booz Allen Hamilton Pinnacle Scholar

REFERENCES

Dr. Jay B. Brockman	University of Notre Dame	Professor	574-631-8801
John McBeth	Next Century Corporation	President	877-867-NEXT
Iman Elnahal	Northrup Grumman	Project Mgr	703-314-4928
Jan Poling	USDA	Supervisor	202-720-9311
Richard Harris	YellowHouse Associates	Supervisor	202-434-4846
Fran Swearengen	Northrup Grumman	Co-worker	703-201-3836

As a Computer Scientist with the Department of Defense, I work to provide secure authorization and authentication for all our branches of the military. I was raised in Washington DC and attended all the city public schools. It was challenging trying to focus on school in the environment in which I was raised which is partly the reason I was unsuccessful the first time I went to college. Several years later, and after a series of dead in jobs, I worked full time and went to college full time. After six years, I got a bachelor's degree in Computer Science from the University of District of Columbia. I quit my full time clerical job, and went to graduate school full time at the University of Notre Dame. I thought I wanted to teach Computer Science at the college level, but after matriculating all the way through graduate school just short of a PhD, I settled on a Master's degree in Computer Science and Engineering.

While at the University of Notre Dame, I did volunteer work for the School of Engineering's Minority Outreach program where we introduced Engineering concepts and skills to minority students in the local public schools. This is where I first discovered I could have a greater impact and encourage more students to considered STEM careers if I could reach them earlier at the middle school level. So for about the last 15 years, I have made it a priority to teach, inspire and encourage minority and inner city kids to consider careers in S.T.E.M. To that end I have taught and coached middles schools students at the Patriots TTC in the Lego Engineering program where we participate in the LEGO FIRST program. The kids in the program learn to design and program autonomous robots using the Lego EV3 system. There is also a research and core value aspect to the program where kids do research on a specific topic and come up with an innovative solution. There also is a core value section where the kids learn to work on a team in a professional and gracious manner. Last Year I was the co-coordinator of the program and I taught all the kids (50+, and coaches how to design and program the robot. For the last two years, I have coach a team in the Patriots Solar System Competition about human exploration on Mars. Last year our team finished in second place, and this year our team finished in first place. Not only did we research mars, but we learned how some of the technology used in space, like solar power and glasshouses, work. Every year, I visit a couple local elementary and middle schools and talk to kids about careers in STEM.

I am a trained Computer Scientist and I am passionate about Science, Math, Technology and Engineering. I am very passionate and curious about the field, and I do my best to inspire and encourage kids to consider careers. I am looking for to attending the Space Camp for Educators so that I can become an even more effective teacher about Space.

Jucain Butler

To whom it may concern,

I am writing this letter recommending Mr. Jucain Butler for consideration to your Space Academy for Educators program. I have known Mr. Butler for three years as a coach on for my son's First Lego League Robotics team. This past year he was a co-coordinator for the entire Patriots Technology Center program, which consisted of eight robotics teams.

Coach Butler, as we know him, has a special way of connecting with kids to help them learn. He can spark interest in kids and make learning fun. Using games, cell phone apps, and memorizing techniques, Coach Butler helps kids remember and apply concepts easier. He has a passion for teaching and takes joy in watching kids learn stem related topics.

I think your Space Academy for Educators would be a perfect fit for Coach Butler and he will be able to share what he learns with so many children at the Patriots Technology Center. I would highly recommend him without reservations.

Sincerely,

Ronald C. Taylor
Rctendo99@gmail.com

April 22, 2016

To whom it may concern,

I would like to recommend that Jucain Butler attend the Space Camp for Educators. Mr. Butler has been a STEM instructor for the Patriots STEM organization for four years. He has coached and coordinated the Lego Competition and has competed in the First Lego League robotics competition. He has also coached our Solar System competition for two years where students research human exploration on Mars. He is very passionate about teaching, coaching, and inspiring our students in S.T.E.M. related activities.

Sincerely,

Thurman Jones

President, Patriots TTC

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Thurman@patriots-ttc.org