

J. ELLIOT MILLER

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HEADLINE

Full Stack Software Developer — C/C++/C/Java/Python — Project Manager and Team Leader

SUMMARY

Programmer, entrepreneur, writer, and recent Bucknell graduate. Passion for elegant design and leaping out of my comfort zone to meet and learn from diverse people. Currently a Project Manager and Software Developer with The Bayeux Group.

ABOUT

A broad base of experience collected with a focus on and passion for small business and entrepreneurship. I like building interesting things with interesting people.

BIO

I'm Elliot, a programmer, serial entrepreneur, writer (I tell myself), and *cum laude* graduate of Bucknell University. My passion is elegant design. There's beauty to a program well written, a project well managed, and a start up well planned. I like to challenge my own assumptions by leaping feet first out of my comfort zone and into new and diverse environments that push me to try harder, to listen and learn more, and to meet interesting new people.

Currently a Project Manager and Software Developer with The Bayeux Group, I have over five years of managing software projects and teams while balancing my career with my education. In my current position, I designed and developed a new project tracking platform in Django that allowed us to more efficiently collaborate while taking the pressures of tracking progress off people and put it onto servers.

BIO

A *cum laude* computer science graduate of Bucknell University, has been involved with the launch and operations of several small businesses. Co-authored a paper on the gamification of electronics education and is currently working on a second paper on ϵ -Differential Privacy protections against adversarial knowledge assumptions; exploring how to exploit the rich world of late '80s video games.

CAREER GOALS

Concrete - "To explore the the ways AI can improve educational access and further engagement among underserved communities using my unique combination of educational theory, psychology, and computer science skillset."

ELEVATOR PITCH

Elliot combines a broad array of skills and experiences from across disciplines, collar colors, and industries to be a leader who can understand and communicate with people from any position or background, and a worker who can fill almost any professional role and occupy any company space.

PROJECTS

Categorical Logic Solver 2017

Program for determining the validity of categorical syllogisms according to Aristotle and Boole

- Written in C
- Explores the close relationship of logic as a philosophical discipline with rudimentary gate functions
- Converts logic problem space to binary dimensions solved with nested looping algorithm

Super Chess 2009

Game platform for parsing strategic thinking from rule learning

- Written in Visual Basic and AutoCAD
- A multivariate chess-like board game developed to explore the divorce of strategy from experience
- Uses plethora of user and randomly chosen game rule variables to build continually unique game play
- Coded in Visual Basic using AutoCAD scripting and modelling as *ad hoc* graphics engine
- Future work will rewrite game for a new platform

World of Hellos 2019 & ongoing

Exploration of common and esoteric languages

- Written in Python, Python 3, Ruby, Java, C, C++, Fortran, Fortran90, R, Lisp, JavaScript, & C#
- Uses file management, recipe parsing, and command line calls to compile and run Hello World in any given language
- Accepts output of programs it runs to confirm proper execution

Project Management Backend 2019 & ongoing

Versatile task management backend

- Written in C++
- Uses C-language pointers to structure task dependency and link ancillary information to appropriate parents
- Explores integration of common database tools with linked list programmatic representation

Math Generator 2019

Mathematics practice problem generator

- Written in C++
- Uses basic computer arithmetic to generate problems and solutions as a teacher's aide
- Future work will implement a learning model of Advanced Exposure to embed simple tasks in a context of an advanced problem

j-elliott.github.io 2019

Personal Website

- Written in HTML and CSS
- Showcases projects and Curriculum Vitea information as well as personal philosophy
- Includes a sexy calendar

Curriculum Vitea 2017 & ongoing

This resumé that you're reading right now!

- Written in L^AT_EX
- Uses custom .cls file to streamline parsing of broad CV into job-specific resumé

The Borden House 2019 & ongoing

Restoration of a local architectural icon

- Consulting contractor in the restoration and refurbishment of a nineteenth century Victorian château

- Oversees electrical and plumbing systems maintenance and development
- Assists in steampunk aesthetic design realization
- Drafted whole house floor plans in AutoCAD along with grounds layout

VR Dragon Riding Simulator 2019

Phone-based virtual reality dragon riding

- Programmed in C# and Unity
- Uses Google cardboard with motion controls to navigate environment in three dimensions
- Implements button input to trigger custom attack animations on stock sprites

Overwatch Gesture 2019

Leap motion gesture control for Overwatch

- Programmed in Java
- Intuitively maps Leap Motion-defined hand gestures to game inputs

Circuit Theory Game 2018

Developed game to intuitively teach circuit theory

- Programmed in C#, Unity, Bash, and SPICE
- Eschews numbers and text in favor of immediate visual feedback of circuit activity
- Represents visual circuit graphs as connection matrices
- Converts matrix representation to text file for input to SPICE
- Parses SPICE output into matrix and visual representation using the Edmunds-Karp algorithm

Gettysburg Soccer Academy 2014

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Ethical H2O 2016

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Wind Turbine Construction 2017

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EDUCATION

Bucknell University June 2016 - May 2019

Bachelor of Arts, Computer Science *GPA: 3.55*

College of Arts and Sciences, Minor in Philosophy

- Bucknell Student Government: Class of 2019 Senator; Advocacy Committee Member; Dining Committee Member; Student Advisory Group Member; Greek Relations Committee Member

Class Tribute Bucknell B

Commemoration Speaker Madeleine Albright

'Ray Response Training

'Ray Resilience

- GSA: Member
- C.A.L.V.I.N. & H.O.B.B.E.S.: Member; Student Driver
- Dragon: Member; Dungeon Master

· ACE

Fall Fest 2018

2017 Escape Room Event: Designed Technology Themed Room

Statistical Literacy for the 21st Century (A-); Psychology of Attraction and Relationships (A-); Caribbean Literature (A); Software Engineering and Design (A-); Intro Latin (B); Calculus III (C+); Computer Organization and Programming (B+); Life, Computers, and Everything (A); Discrete Structures (B+); Logic (A); Computer Science Design Project (B+); Operating System Design (B+); Algorithms (B+); Philosophy of Peace and Nonviolence (A); Cognitive Science (AU); Human-Computer Interaction (A-); Symbolic Logic (A); Philosophy of Society and Politics (B+); Consciousness, Self and Mind (A); Wireless System Design (AU)

Harrisburg Area Community College June 2014 - May 2017

Associate of Arts, Mathematics and Computer Science *GPA: 3.96*

- HACC Student Government Association: Legislative Chair; Senator; Ethics Committee Chair
- Phi Beta Lambda: President
- Phi Theta Kappa: Member

Modern Culture and the Arts (A); Intro to Statistics (A); English Composition (A); Trigonometry (A); Principles of Accounting I (A); Pre-Calculus (A); General Psychology (A); Principles of Accounting II (A); Effective Speaking (A); Applied Calculus for Business (A); Principles of Marketing (A); General Biology I (A); Java Programming (A); Calculus I (A); Introduction to Sociology (A); Intro to Computer Systems (A); Computer Science I (A); Object Oriented Programming (B); Calculus II (A); Beginning Self-Defence (A); General Inorganic Chemistry I (A); Computer Science II (A); Discrete Mathematics (A); Linear Algebra (A).

National Center for Construction Education and Research May 2013 - April 2014

Certificates in HVAC/R, Safety, and other construction fields

Reference #: 11142092

Core Curricula; Basic Safety; Intro to Construction Math; Intro to Hand Tools; Intro to Power Tools; Intro to Construction Drawings; Basic Communication Skills; Basic Employability Skills; Intro to Material Handling; Intro to HVAC; Trade Mathematics; Copper and Plastic Piping Practices; Soldering and Brazing; Ferrous Metal Piping Practices; Basic Electricity; Intro to Cooling; Intro to Heating; Air Distribution Systems; Commercial Airside Systems; Chimneys, Vents, and Flues; Intro to Hydronic Systems; Air Quality Equipment; Leak Detection, Evacuation, Recovery, and Charging; Alternating Current; Basic Electronics; Intro to Control Circuit Troubleshooting; Troubleshooting Gas Heating; Troubleshooting Cooling; Heat Pumps; Basic Installation and Maintenance Practices; Sheet Metal duct Systems; Fiberglass and Flexible Duct Systems; Intro to Photovoltaics; Site Assessment; System Design; System Installation and Inspection; Maintenance and Troubleshooting; Your Role in the Green Environment; 10 Hour Construction Site Safety Orientation; HVAC Level One; Solar Photovoltaics System Installer; Solar Photovoltaic; HVAC Level Two.

Ferris State University August 2013

Geothermal for Home Certification

Ohio University June 2011 - August 2011

Course Work *GPA: 4*

College Algebra (A); Writing and Reading: Gender (A).

Pennsylvania Highlands Community College January 2009 - December 2009

Certificate of Office Technology *GPA: 4*

Microsoft Office Suite

Microsoft Excel (A); Microsoft Word (A); Microsoft ACCESS (A); Microsoft PowerPoint (A); Theory of Computing (A)

Pennsylvania Department of Education Various

–Needs work. Are those two really the same department? Also, add grades to ged and detail to drafting.–

GED; Drafting stuff

RELEVANT EXPERIENCE

Vogon Constructors, LLC July 2019 - April 2023

Manager/Owner/Electrician/Project Manager

- Built business from nothing
- Created company brand and marketing campaigns
- Managed sales and customer relationships
- Ran up to five figure projects
- Trained employees for both trade work and administration
- Engaged in troubleshooting and maintaining residential and commercial systems and equipment
- Electrical service and control installation

Garryowen Irish Pub September 2023 - October 2023

Line Cook

- Cooked food on a line

Nooch's Pub and Grill November 2019 - January 2020

A Stinking Cook

- Who the fuck cares?

Private Family October 2019 - Present

Fourth Grade Math and Computer Science Tutor

- Provides intensive, one-on-one tutoring in math and computer science
- Utilizes Unity to create lesson plans and curricula tailored to student's needs
- Blends foundational math practice with the introduction of mid and high level concepts to actively engage the children's minds and activate an interest-based approach to drilling and repetition
- Dungeon Master

Bucknell University June 2018 - August 2019

Undergraduate Research

- Employed SciKitLearn in Python environment to construct machine learning classifiers used in analyzing effectiveness of ϵ -Differential Privacy data protections
- Engineered custom Python/NumPy application to extract and present experiment results across seven variables
- Presented research at Susquehanna Valley Summer Research Symposium
- Ran artificial intelligence attacks using university Linux cluster against ϵ -Differentially Private data

Marissa Deihl, SP September 2018 - May 2019

Software Developer

- Primarily responsible for identifying project goals and realizing those goals in code

- Collaborated on team using agile and scrum methodologies to build Unity environment educational application
- Managed feedback in data driven iterative design and testing process, iterating project three times in seven months

The Bayeux Group November 2014 - Present

Owner/Manager

- Founded company to provide business services to new entrepreneurs
- Managed company while overseeing launch of two companies and management of over ten others
- Directed bookkeeping, scheduling, customer and supply chain management, traditional and e-marketing, cost control sales strategic planning, product development, risk management, and software and data analytics on behalf of clients
- Using Gimp, Facebook, and Google and Adobe Suites, created marketing campaigns to promote products and services in multiple industries
- Developed and implemented business reporting process to monitor project progress and delivery status
- Hired, supervised, and trained new employees for multidisciplinary teams

Dan Kerstetter, Millwork November 2017 - May 2019

Assistant Woodworker

- Worked with master woodworker to build and restore custom cabinetry and furniture
- Used and maintained powered machinery in accordance with OSHA best practices
- Provided business and technology support to back office operations

VSFS September 2018 - December 2018

Software Developer

- Worked on software development team to produce gamification simulation of VA hospital operations structure
- Collaborated exclusively through video conference technology in scrum structure
- Developed custom artificial intelligence solution for product using Unity tools

Appalachian Brewing Company April 2014 - August 2017

Assistant to the Kitchen Manager/Head Dessert Chef

- Managed and prepared pre-product materials to line cooks
- Held position of leadership and teamwork on line during high-output, mission critical periods demonstrating ability to work well under pressure
- Occupied maintenance and information technology oriented roles to restore production quickly and efficiently
- Scheduled employee shifts
- Ordered and received supply shipments from vendors
- Organized and stocked supplies to improve efficiency
- Cleaned and maintained kitchen to professional standards
- Developed and tested new recipes and designed dessert specials
- Trained new employees in line and prep roles, policies, and best practices

Ethical H2O December 2015 - August 2017

Senior Technician

- Managed company finances and bookkeeping using QuickBooks, Excel, Google Suite, and GnuCash
- Conducted sales calls and services to current and potential customers
- Serviced and installed broad range of water treatment and plumbing equipment and systems

- Performed scientific laboratory testing of samples for indicators of human health threats
- Wrote policy, hired and handled professional service providers, and maintained company records
- Hired and trained service technicians and administrative staff

Wilson Leather November 2014 - January 2015

Sales Associate

- Engaged with customers to determine needs and assist in finding product
- Handled credit, cash and check transactions in courteous and efficient manner
- Received, stocked, and arranged product according to specification

SCIC January 2011 - March 2014

Electrician's Assistant, Environmental Technician, Dock Hand

- Trained by master electrician with over 30 years experience
- Involved in team pull of high amperage, high voltage new electrical service
- Collaborated on complete rewire of fitness facility including rebuild of 5000+ sq. ft. lighting provision
- Engaged in troubleshooting and maintaining institutional and industrial systems and equipment
- Electrical service and control installation
- Operated front-end loader
- Assisted in rigging and lifting operations
- Removed and sorted institutional waste
- Received security clearance for restricted areas
- Operated pallet jacks loading and unloading shipments of supplies
- Stocked and maintained line food service during high output operation times
- Assisted with testing of new baked goods and experimented with new recipes

Eisenhower Inn and Conference Center ...

Bellman

- No one cares

Round Top Campground ...

Cashier

- No one cares

TECHNICAL STRENGTHS

Computer Languages	C/C++, Java, Python, Visual Basic, C#
Software & Tools	Unity, LaTeX, Git, Gimp, Microsoft Office Suit, AutoCAD, Quickbooks, SPICE

VOLUNTEER EXPERIENCE

Rail Trail 2019

- Haven't started yet

HOPE Program Canine Rehabilitation 2013

Dog Handler

- Worked with professional dog trainer to train, care for, and rehabilitate unadoptable dogs, preparing them to be placed in permanent homes

Spirit of Gettysburg 5k Charitable Footrace 2014, 2015

Volunteer Leader, Traffic Control, Race Results

- Rode motorcycle to lead wheelchair section of race through course; entered unchecked traffic, preventing collision with racers
- Rode bicycle to lead children's race through course
- Directed vehicular and pedestrian traffic during pre-race period
- Received, ordered, and confirmed race results in real time to be used for awards and listings.

Adams County Rescue Mission 2014

Recycling Sorter

- Helped sort and prepare recycling materials.

HACC Environmental Club 2015

River Cleanup Crew

- Traveled down local waterway removing trash and debris.

Sinai Hospital, ER7 1999

Illegal Child Labor

- Copied, filed, shredded and recorded hospital documents under the direction of staff; ran errands and delivered messages throughout hospital

ASSOCIATIONS & PROJECTS

Association for Computing Machinery

Project Management Institute

ACADEMIC ACHIEVEMENTS

Bucknell Community College Scholars Program Scholarship

Graduated *cum laude* from Bucknell University

Dean's List: Spring 2019; Fall 2016; Spring 2016; Fall 2015; Academic Year 2015

Outstanding Freshman Math/Computer Science Student

Outstanding Sophomore Math/Computer Science Student

2016 Bucknell Community College Scholars Program

SGA Senator of the Semester; Fall 2015

First in Who's Who; Phi Beta Lambda 2016(?) Conference

Second in Strategic Analysis and Decision Making; Phi Beta Lambda 2016(?) Conference

Third in Project Management; Phi Beta Lambda 2016(?) Conference

Benchmark of Excellence: Electrical; Heat Pump; Certified Carbon Monoxide Inspector; Combustion Analysis; HVACR Electrical Plumbing; Basic Refrigeration and Charging Procedures; System Diagnostic and Troubleshooting Procedures

LICENSES AND CERTIFICATIONS

EPA Universal Refrigerant

OSHA 10-hour

PUBLICATIONS AND PRESENTATIONS

Susquehanna Valley Summer Research Symposium Poster

(Circuit Game)

(DP Experiment)

INTERESTS AND ATHLETICS

Sailing; Ballroom Dance; Piano; Violin; Guitar; Architecture; Horticulture; Chemistry; Cybernetics; Electronics; Video Games; Legos; Running; Obstacle Courses; Climbing; Combat Sports; Rappelling; One Punch Workout; Cycling

Resumé compiled using L^AT_EX