Brady Bolton

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Current Address:
1009 University City Blvd., Apt. H5
Blacksburg, Virginia 24060

Permanent Address:
13345 Point Rider Ln.
Herndon, VA 20171

Education Computer Science (Primary) and CMDA (Secondary), *Fall 2021*
Minoring in Mathematics and Statistics
GPA: 3.51/4.0

Skills Python, C/C++, Go, MATLAB, R, Java, Git, CUDA/MPI/MPICC, LaTeX, Lisp
Linux, BACnet (IP/MSTP), Docker/Docker-Compose, gRPC, proto3

Recent Projects

Ray Tracing with Parallel Computing
- Worked with parallel computing structures like MPI (Message Passing Interface), MPICH (MPI implementation), and the CUDA platform by NVIDIA
- Utilized the NewRiver computation cluster to generate scenes by simulating light

Data Analysis of VT's Transit System
- Retrieved and analyzed campus-wide data (n = 240) for statistical analysis
- Utilized R programming libraries to uncover pain-points in the transit system

Related Experience

Software Engineering Co-op, Daikin Applied Americas, Spring 2020 – Summer 2020
- Integration testing for building automation systems (BAS) running BACnet IP/MSTP, MODBUS, and Webkit
- Focused on Python best-practices, project development, and documentation using cool tools like PyTest, Cython, and Sphinx

Controls Programmer, Virginia Tech Hyperloop, Fall 2019
- Using QT platform facilitating real-time sensor data transfer to a remote GUI and communicate with SpaceX's track telemetry system via UDP
- Working closely with aerospace and mechanical sub-teams to understand and simulate pod mechanics

Undergraduate Research Assistant, Socha Labs, Spring 2019 – Summer 2019
- Programmed sensor and servo control/data-acquisition interface for robotic fish
- Worked closely with faculty at the Socha Lab of Biomedical Engineering and Mechanics (BEAM) to empirically reproduce bio-mechanical studies on fish locomotion mechanical efficiency

Co-founder and Lead Designer, Zorse Code LLC, Summer of 2017 – Summer 2018
- Co-founded a gaming start-up that incorporates augmented reality
- Designed and produced Graphical User Interface, artwork, and navigation system

Interests

Literate Programming (TeX-family, markup flavors, and org-mode)
Networking and Self-Hosting (currently running NextCloud, WireGaurd, PiHole)
Functional Programming (Scheme and Emacs flavors of Lisp, SICP)
Data Curation (Hoarding), Ontology (OWL), and ways to organize information
An undisclosed amount of dot-file tweaking

Awards and Activities

Microsoft Imagine Cup Competition
Philosophy Club
ICPC Team Honorable Mention Award (2018)
4th International MIT Zero Robotics Alliance
Gaming Project at Virginia Tech
ACM Programming Team (Fall 2018)
Virtual Entities (AI Programming)