William Thomas Hahn

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EDUCATION

Purdue University, West Lafayette, IN — ***Expected May 2022***
Bachelor of Science in Computer Science — ***GPA: 3.22/4.00***

Carmel High School, Carmel, IN — ***May 2018***
Academic Honors Diploma, Technical Honors Diploma, AP Capstone Diploma — ***GPA: 4.17/4.00***

AP Exams
5 on: AP Computer Science A, AP Calculus AB, AP Calculus BC, AP Capstone Research

TECHNICAL SKILLS

Ranked: 1 (Learning) – 10 (Proficient)

Languages: Java (9), C (9), C++ (7), Bash (6), HTML & CSS (4), GLSL (3)
Software/Tools: Eclipse IDE (9), Unix/Linux (7), Git (7), Arduino (7) Visual Studio (6), VIM (5), Bootstrap (4), OpenGL (3), DirectX (3), SFML (3), CUDA (2), OpenCV (2)

PROJECTS

Personal Website: ***Personal Project*** – HTML & CSS — ***October – December 2018***
- Designed a personal website using Bootstrap
- Learned to use HTML, CSS and Bootstrap to develop the website

Neural Network: ***AP Capstone Research Project, Independent Study Project*** – C++ — ***January – April 2018***
- Researched the impact complex training data has on neural network training times and found a positive correlation between complexity and training time
- Implemented training data efficiency comparison
- Integrated a polymorphic program to generate neural networks from a predefined layout file
- Designed and implemented mathematical function generating algorithm

3D Map Generation: ***Independent Study Computer Science Project*** – C++ — ***August – December 2017***
- Rendered map of 3D cubes where the user could move and view the map
- Implemented Voronoi noise to generate the map and used the DirectX API to render on the screen

Image Manipulation Projects: ***Personal Projects*** – Java — ***2016-2017***
- Traversed 2D arrays to generate the Mandelbrot set and the Julia set
- Split, modified, and saved different images into new formats

Screen Recorder: ***Personal Project*** – Java, C/C++ — ***December 2016***
- Implemented an algorithm which continuously captured screenshots.
- Designed User Interface to preview and modify video
- Integrated OpenCV and Java Native Interface within the project to increase the possible framerate by 87.5%

WORK EXPERIENCE

Risque Development Group: ***Student Software Developer*** — ***January 2019***

Office Depot: ***Sales Associate*** — ***Summer 2018***
- Stocked shelves with office supplies
- Learned Customer Service and communication skills with customers and co-workers

RELEVANT COURSEWORK

Current: *Data Structures and Algorithms*, *Computer Architecture*, Competitive Programming, Elementary Linear Algebra
Past: Fundamentals of Computer Science, *Programming in C*, Multivariate Calculus, AP Computer Science A, AP Calculus BC, Computer Programming 1, Digital Electronics

ACTIVITIES AND VOLUNTEER WORK

Association of Information Technology Professionals	Member	***2018 – Present***
Tutoring	Math, Chemistry, Computer Science	***2016-2018***
Carmel Jazz Band	Trombone Player	***2014-2018***
Carmel Concert Band	Principle Euphonium	***2014-2018***
Carmel Marching Band	Leadership Team Member	***2013-2017***

ACCOMPLISHMENTS AND AWARDS

National Honor Society — ***May 2017-May 2018***
AP Scholar with Distinction — ***2018***
National AP Scholar — ***2018***