**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   * 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++   * 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++   * 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   * 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++   * 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% | | | | | | | ***October – December 2018***  ***January – April 2018***  ***August – December 2017***  ***2016-2017***  ***December 2016*** |
| **WORK EXPERIENCE** | | | | | | |  |
| **Risque Development Group: *Student Software Developer***  **Office Depot: *Sales Associate***   * Stocked shelves with office supplies * Learned Customer Service and communication skills with customers and co-workers | | | | | | | ***January 2019***  ***Summer 2018*** |
| **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**  **Tutoring**  **Carmel Jazz Band**  **Carmel Concert Band**  **Carmel Marching Band** | | | Member  Math, Chemistry, Computer Science  Trombone Player  Principle Euphonium  Leadership Team Member | | | | ***2018 – Present***  ***2016-2018***  ***2014-2018***  ***2014-2018***  ***2013-2017*** |
| **ACCOMPLISHMENTS AND AWARDS** | | | | | | | |
| National Honor Society  AP Scholar with Distinction  National AP Scholar | | | | ***May 2017-May 2018***  ***2018***  ***2018*** | | | |