Benjamin Martin Burke
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Ben Burke

Profile

A highly motivated and results-driven Software Engineer with experience in developing and maintaining software solutions across embedded systems, web technologies, and database management. Proven expertise in Python, Linux, and object-oriented programming, with a strong foundation in system architecture and project management. Recognised for problem-solving skills, adaptability, and leadership potential, with a track record of taking ownership of key projects and driving continuous improvements. Passionate about mentoring, collaboration, and leveraging technical expertise to contribute to high-performing development teams.

Education

Bedford College, 2016 - 2018

Electrical and Electronic Engineering
Level 3 (A-Level Equivalent)
Distinction*, Distinction*, Distinction
*: Star - Higher achievement

University of Kent, Canterbury, 2018-2022

Computer Systems Engineering
with Year-in-Industry
Bachelor of Engineering with Honours
First Class Award

University of Kent – Systems-focused bachelor's degree incorporating computer science and electronic engineering modules. Key areas explored include fundamentals of electronics and circuit design, digital and analogue systems, mathematical systems modelling, and signal processing. A range of languages are covered, including MATLAB, C/C++, VHDL, Java, JavaScript, HTML, CSS, PHP, and SQL. Additionally, the course also explored the concepts of Object Oriented Programming, the fundamentals of AI and neural networks, and project management. Included a year-in-industry between the second and third stages.

Bedford College – Two-year A-Level-equivalent course covering core introductory areas of electrical and electronic engineering. Units covered core and further mathematics, electrical principles, circuit design and build with both theoretical and practical experience. The second year had a large focus on microcontrollers, microprocessors and programming in C++ and Assembly.

Skills

Languages

Python (3, 2.7)
Java, Object Oriented Programming
JavaScript / TypeScript
HTML, CSS, Angular, Electron
NodeJS, Express, Flask
SQL, Sqlite3
C, C++

Technologies

Linux
Shell Scripting (Bash, Powershell)
Microcontrollers (C++)
REST APIs
Front End Web Development
Back End Web Development
Database Management
Android (Kotlin)

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Experience

- **Software Engineer, Python, Linux - Grosvenor Technology Ltd., Aug. 2023 - Present**
  Working as a Python Software Engineer on an embedded Linux Human Capital Management solution. I act as the primary Python developer, overseeing the continuous development and patching of numerous customer applications. In addition to Python development, this role also involves skills in SQL database management, Linux system management, shell scripting, and web API interfacing. I occasionally assist with the development of the company's Android applications, and I am the primary maintainer of an internal test server built using Kotlin's Ktor framework. In this role I have also built custom development tools for remote device management using the Angular framework and Electron, as well as configuring Gitlab CI/CD pipelines with custom Docker images.

- **Software Engineer, CGI, July 2020 - August 2021** – Industrial placement year, working on a Cybersecurity project as a Software Engineer using Python and managing Linux systems. Hands-on experience with networking hardware and software on a large-scale cybersecurity solution. Contributed to deploying releases and bug fixes. Additionally, I worked on a Machine-Learning side-project in which I developed a web-based front-end UI using Angular.

- **University Dissertation Project, 2021 - 2022** – Development of a robotic prosthetic hand and computer-vision-based control system. Novel ground-up design of 3D-printed mechanically self-contained robotic prosthetic hand. Designed a custom PCB expansion for the ESP32 microcontroller board, and wrote a control program in C++, using FreeRTOS. Developed a complementary computer-vision based hand tracking system combined Machine-learning with forward and inverse kinematics to generate control patterns for the developed prosthetic.

Additional Awards and Achievements

Institution of Engineering and Technology (IET) Award, University of Kent, 2022
Awarded for distinction shown at the University of Kent in a course leading to the award of a degree in Computer Systems Engineering.

The School of Engineering Industrial Placement Award, University of Kent, 2022
Awarded for best performance in industrial placement year final report at University of Kent.

Rapid Electronics Sponsored Best Project Demonstration Award, University of Kent, 2020
Awarded joint first place for best project demonstration for in 2nd year of bachelor's degree for group project module.

Rapid Electronics Sponsored Cross-Channel Robotics Competition, University of Kent, 2019
Awarded for demonstrating notable performance in an inter-university robotics project during first year of bachelor's degree, sponsored by Rapid Electronics.

Rotary Youth Leadership Award, 2018
Awarded on completion of the RYLA program which builds leadership and teamwork skills through physical activities, a business simulation game, and a two-day on-foot expedition.

Mercedes-AMG Sponsored Engineering Student of the Year, Bedford College, 2017
Presented the Mercedes-AMG Sponsored for notable dedication to engineering during first year of course.