



# Jack Bonnell

SENIOR SOFTWARE ENGINEER

## Profile

Driven and consistent provider of high quality software and hardware solutions whilst managing small teams and mentoring junior team members, with a proven track record in C++ 17 to 20 and Verilog based code creating highly resource efficient and low latency projects using object orientated code in Agile work environments. I thrive in stressful and complex environments. I have a passion for learning on the job, adapting to scenarios to better improve solutions whilst increasing my personal knowledge. I have gained a reputation of being both a capable leader and a team player with a reputation for leading and delivering embedded system projects on time and with the highest attention to detail.

## Employment History

### Senior Software Engineer (C Development), Dunnhumby, Manchester

DEC 2023 – PRESENT

At Dunnhumby, I specialize in designing and implementing low latency reporting systems tailored for big data environments. My role involves leveraging cutting-edge technologies and methodologies to ensure real-time data processing and analysis, enabling rapid insights and decision-making. Through continuous optimization and refinement, I strive to enhance system performance and efficiency, meeting the demands of high-volume data streams. Collaborating with cross-functional teams, I contribute to the development of robust and scalable solutions that empower organizations to extract valuable insights from their vast data repositories.

### Senior Software Engineer (Core Tech), Magnopus, London

JUN 2022 – PRESENT

At Magnopus I worked on a strongly typed abstraction layer used by multiple internal client code bases. This layer was developed in c++ and then translated using a custom template Engine into C, C#, WASM and Swift. Using agile processes to adapt to the changing nature of requirements from clients whilst also have a longer term goal to go open source and create a community of developers. I have enjoyed the challenge of keeping up with the needs of multiple clients whilst keeping a level of abstraction allowing for singular processes to work on multiple client and found this work to have increased my critical thinking capacity exponentially.

### Lead Software Engineer , Smart Surgical Appliances LTD, Long Eaton

DEC 2021 – JUN 2022

Whilst working at Smart Surgical I have been working on low latency vision FPGA (Card to host) based products using MIPI based camera systems for use in surgical applications. Creating work flows to increase development performance using automated build and testing processes to lower development time. Alongside this I have been developing the host based C++ software that interacts with the FPGA based system to interact and display camera footage to the end user.

### Senior Systems Engineer, Sundance Multiprocessor Technology, London

FEB 2019 – DEC 2021

Working at Sundance through my final year at university part time and going full time once graduated I strive to push the boundaries of what is possible with embedded systems working for a number of industries such as Argri-Tech and the film industries I have lead a number of successful embedded design projects using a multitude of

## Details

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## Links

[LinkedIn](#)

[GitHub](#)

[Personal Website](#)

## Skills

Agile Methodologies

Teamwork

Critical Thinking

Detail Oriented

Independently Motivated

programming languages such C++ 11 to C++ 20 and Verilog. Creating highly efficient custom bridged C++ libraries so companies can interface between the FPGA and their C++ programs

### **Consultant, Isopyre, Warrington**

SEPT 2017 – OCT 2018

Working as a consultant at Isopyre I was in charge of software support and bug fixes working in a small team where every person counts. This has given me a drive for efficiency in my work flow and a obsession with proper coding structure. Working in programming such as C++ and C# I was able to create adaptive and responsive front and back end environments for our customer facing products.

## **Education**

### **Computer Systems(Forensics and Security)(2:1 BSC Hons), Nottingham Trent University, Nottingham**

SEPT 2015 – SEPT 2019

At university I pushed myself to create a work ethic that has filtered through into my professional career. Not being pleased with just graduated from university I pushed for academic excellence by getting parts of my dissertation published. All this whilst consistently volunteering in the Cognitive Robotics Lab and being an active member of the Software Development Society creating C++ ROS wrappers for real time sensors used in the Lab.

## **Courses**

### **Embedded academy 2020, Xilinx**

OCT 2021 – OCT 2021

### **Agile & Scrum in Depth: Guide, Simulation and Best Practices**

NOV 2020 – DEC 2020

### **Manage Change Through Collaboration and Team Work**

FEB 2021 – FEB 2021

## **Hobbies And Interests**

### **Hackathon Contestant, Devsoc (Software Development Society), Nottingham**

FEB 2021 – FEB 2021

Whilst at University I represented Devsoc at a number of Hackathons. Working under hard time constraints to produce objective dependent solutions. This increased my critical and situational thinking allowing me to scope specific parts of the project to get the best results in the time scale provided.

### **Open Source Development**

FEB 2016 – PRESENT

For the last 5 years I have had a keen interest in the progression of Open Source software actively contributing to a number of different open source repositories such as OpenMV and Pimorini.

### **Member, Computational Neurosciences and Cognitive Robotics Lab, Nottingham**

2018 – PRESENT

Whilst at Nottingham Trent University I was one of 3 students allowed to join CNCR. Whilst at CNCR I undertook research roles helping the lab supervisor with

programming tasks such as ROS Implementation, Object detection Modeling using YOLO, Tensorflow and Darknet and also documentation tasks.

Whilst no longer at Nottingham Trent University I am still in contact with the Lab Supervisor and help out with project when I have spare time.