Ben Lancaster

(+44) 07722 358258 ben@bendl.me
Plymouth, United Kingdom

https://uk.linkedin.com/in/bendl
https://github.com/bendl
http://bendl.me

PERSONAL PROFILE

I am passionate about Embedded Firmware/Software and FPGAs with great experience from an RF Firmware Engineering placement. I am interested in Linux kernel and driver development and I am active in the open-source community with contributions to Gravity-lang (compiler). I am always looking for an interesting project to dive into.

Key strengths:

- Self-motivated
- Problem-solving
- FPGA Placement experience
- C & C++
- Embedded Firmware/Software
- Linux kernel + driver development

EMPLOYMENT

Firmware Engineer, Placement **Spirent Communications** **June 2016 – August 2017**

- Embedded programming on Xilinx MicroBlaze FPGAs and PIC16/24 microcontrollers.
- Linux USB and PCIe kernel driver development.
- Implemented on-chip power levelling and calibration for GNSS RF signal generators.
- Controlling on-board fans, LEDs, EEPROM, and other peripherals with I2C and SMBus.
- Configuring, building, and maintaining Embedded Linux distributions using Yocto.

EDUCATION

BSc (Hons) Computer Science *(Current)* **Plymouth University** **Fall 2014 – Summer 2018**

- **Final Project:** FPGA-based 16-bit RISC soft-microprocessor (with IO & interrupts) and Compiler.
- Courses include: Digital Electronics, Embedded Systems and Compilers, Machine Vision, Computation Theory.

OPEN-SOURCE PROJECTS & CONTRIBUTIONS

- **16-bit RISC soft-microprocessor** bendl/vcc An FPGA-based RISC soft-microprocessor written in Verilog.
- **Self-hosted Compiler and Standard Library** bendl/libccl A C-like programming language and optimising compiler supporting, 8086, x86. Includes self-written standard library. C/C++, LLVM, Assembly.
- **Gravity-lang** marcobambini/gravity Contributor to an open-source compiler and virtual-machine. Contributions include fixing Windows runtime.
- **NRBF Neural Network –** A dynamic NRBF neural network written in Python to predict UK energy usage.

ADDITONAL EXPERIENCE AND AWARDS

- Dean's List 2015 & 2016 member. List of students who achieved academic excellence in their studies.

TECHNOLOGIES

- C, C++, Python, Linux (user + kernel), Bash
- Linux kernel and driver development
- Xilinx FPGAs, ISE, Vivado, Impact, Visual Studio, CMake, CUDA
- GitHub, GitLab, SVN

REFERENCES

Available on request.