

# Bassam Helal

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## Projects

**Wudooh**: Published Chrome and Firefox extension that changes Arabic text appearance. Used by over 1,500 users globally. Written in TypeScript

**Unsplash Photo Picker**: Published Android Library that allows you to quickly search Unsplash for free photos with just a few lines of code. Written in Kotlin

**HLS2VOD**: Desktop application that downloads HLS streams according to a user defined schedule. Written in TypeScript using Electron and ReactJS

**Animation Vectorizer**: MSc degree final project that attempts to convert raster graphics cartoon images into SVG images using advanced image processing algorithms.

**Instrument Digitizer**: BSc degree final project that transforms instrument audio into full digital instruments using Fourier Transform and additive synthesis. Written in Kotlin

**JRtMidi**: JVM bindings to the famous C/C++ library RtMidi which provides cross platform support for sending and receiving MIDI messages. Written in Kotlin

## Technical Skills

Advanced proficiency in **Kotlin** and **Java** for **JVM** and **Android** Development

Advanced proficiency in **TypeScript** for **Node.js** and **ReactJS** development

Advanced proficiency in **Test Driven Development** methodologies

Advanced proficiency in **Object Oriented Design** and principles

Advanced proficiency in **Functional Programming** concepts and principles

Intermediate proficiency in **Audio Programming** concepts and principles

Intermediate proficiency in **ANSI C**

Intermediate proficiency in **bash** scripting and **GNU/Linux** concepts and principles

Basic proficiency in **C++14**

Basic proficiency in reading **x86 assembly language**

Basic proficiency in **Python**

# Education

**BSc. Software Engineering** from Swansea University in 2019: First Class with Honors

**MSc. Advanced Software Technology** from Swansea University in 2020: Merit

Some modules taken across both courses:

- Software Engineering
- Operating Systems and Architectures
- Advanced Object Oriented Programming
- Concurrency
- Algorithms & Data Structures
- Software Testing
- Web Application Development
- Data Representation, Markup Languages and Web Services
- Big Data and Machine Learning
- Database Systems

Both degrees required a written dissertation accompanied by a project, which both received a first class and distinction mark respectively.

# Soft Skills

**Fast learner** with a strong passion for learning new things, not just in software

Strong **teamwork** and **communication** skills with a passion for helping people

Strong **problem solving** skills

**Open minded** and willing to try new tools and solutions

**Culturally diverse** from moving and traveling across continents

Native fluency in **English** and **Arabic**, elementary proficiency in **Turkish**

# Interests

I am a passionate advocate for Free (as in Freedom) software. I use GNU/Linux as my daily operating system.

I enjoy all facets of music, especially listening to music from across the world. I play the keyboard in my free time.

I enjoy learning about different cultures and languages in particular and am a regular contributor to Wiktionary in my spare time.