Name	Bodey Royce Baker
Date of Birth	5th October 1984
Citizenship	Australian
Email	bodeybaker@gmail.com
Phone	+82-10-2186-1005
Location	Seoul, South Korea

"I would recommend Bodey to anyone seeking a reliable, efficient and well informed engineer and team leader."

Paul G. Dewar - *Chief Operating Officer - Cyber Technology*

"Bodey's performance at the company was outstanding. I highly recommend him for research and development engineering work."

Xavier Orr - *Director of Research and Development - Cyber Technology*

Skills

Programming	Java, Python, C (Highly Proficient)
	C++, C#, MATLAB, PHP, JavaScript, HTML, CSS, MySQL (Proficient)
Familiar Platforms	Android, Stellaris microcontrollers, .NET, Gumstix (OMAP3430)
Theory	Algorithms, Machine Learning, Computer Vision, Visualisation, Parallel Computing, Artificial Intelligence (AI), MultiAgent Systems (MAS)
Engineering	Robotics, Embedded Systems
Mathematics	Linear Algebra, Multi-Variable Calculus, Probability, Statistics, Control Theory
Operating Systems	Linux, UNIX, Mac OS X, Windows XP/7/8

Experience

Contractor — **March 2012 - Current**

- Contractual work for a start-up doing tasks involving preprocessing of point clouds, computer vision, web services and 3D models.
- Prototyping language learning application for the Android platform playing with the Android API and SCRUM / agile methodologies.
- Self study: Startup Engineering - Coursera / Stanford

Avionics Software Engineer — **July 2010 - July 2012**
Cyber Technology
Australia

- Implemented the UI for controlling and configuring UAVs using JavaScript & PHP to network with the ground control server.
- Implemented the UI prototype in Java.
- Designed and wrote the firmware and boot loaders for our peripheral devices using C and the Code Sourcery toolchain. This required knowledge of UDP, CAN and reverse engineering of third party bus protocols.
- Prototyping / analysis of data in Python and C#.

Undergraduate Engineer — **May 2009 - June 2010**
JRB Engineering
Australia

- Processed data in Python to ensure vehicles met vibration requirements.
- Improved the pattern matching algorithm for brake pad detection using Python.
- Wrote Visual C# Visualisation software to highlight issues in current software.
- Improved Visual C++ program remove noise from point cloud data.

Assistant English Teacher — **May 2008 - February 2009**
W5 Staff Services
Japan

- Taught English to primary and junior high school students.
- Duties: planning lessons; teaching; communicating with students.
- Skills: teaching; public speaking; motivating; integrating into cultures.

Undergraduate Engineer — **January 2008 - March 2008**
JRB Engineering
Australia

- Visualised the output of log files using Visual Studio with C++.
- Created dynamic libraries for data processing routines in Windows
- Modelling parts for a road rail vehicle using Autodesk Inventor.

Research Assistant — **August 2007 - January 2008**
Centre for Exploration Targeting
University of Western Australia
Australia

Studied the feasibility of using Amira to process 3D data sampled from rock samples to analyse their composite structure and visualise the segmented data using a 3D projector for better data exploration.

Research Assistant — **December 2006 - December 2007**
Centre for Exploration Targeting
University of Western Australia

- Researched an algorithm to analyse the directional variation of roughness of a rock surface from 3D geometric data using MPI for C.
- Skills Gained: visualisation; parallel computing; algorithm design.
- Eventuated in a paper.

Education

2011: Bachelor of Engineering (Mechatronics) - The University of Western Australia

Thesis: *Developing a stand alone wireless sensor network for damage detection using the impedance method*
This project required changing the platform of an active damage detection system from large and expensive laboratory equipment to a cheaper and smaller embedded platform that is more applicable to the field. This involved cross-compiling for an embedded platform using OpenEmbedded, user and kernel level code, some circuit design and mathematical analysis of sensor readings.

Developed Skills: Cross-compiling; embedded software; kernel level development; linux architecture; hardware; SPI.
Units with distinction: Algorithms, Software Engineering Design, Object Oriented Programming, Embedded Systems, Robotics and Automation, Real-time Distributed Computer Systems, Computer Architecture, Operation Systems, Mechatronics Systems, Advanced Control Engineering

2006: Computer Science with Honours - The University of Western Australia

Thesis: *Strategy specification for teamwork in robot soccer*
Researched planning in multi-agent systems where a team of agents have a common goal, are being hindered by other agents, only have a limited view of the world, and due to time constraints not all team members can be informed of the planned solution but they must still co-ordinate in a reasonable manner.

Developed Skills: Algorithms; C++; Visual Studio.
Units with distinction: Computer Vision, Scientific Communication, Visualisation
GPA (WAM) 6.00 (74.13)

Manjimup Senior High School

TER	95.55 percentile
TEE subjects	Calculus, Applicable Mathematics, Physics, Chemistry, Geography, English

Scholarships and Prizes

2007: Top of the Computer Science honours unit "Scientific Communication"
2006: Commonwealth Accommodation Scholarship
2001: Institute of Engineers award for attaining a TEE score above 75% in:
Chemistry, Physics, Calculus and Applicable Mathematics.
2000: Olympic Torch Escort Runner

Publications

- B. Baker, K. Gessner, E.J. Holden, and A. Squelch, *Automatic detection of anisotropic features on rock surfaces*, Geosphere, Geological Society of America, (April 2008), 4(2):418-428
- B. Baker, M. Reynolds and W. Liu, *Strategy specification for teamwork in robot soccer*, PCAR '06: Proceedings of the 2006 international symposium on Practical cognitive agents and robots (New York, NY, USA), ACM Press, 2006, pp. 129–140.
- B. Baker, K. Gessner, E.J. Holden, and A. Squelch, *Automatic analysis and visualisation of rock surface roughness,* Deformation in the desert (Alice Sprints, Northern Territory, Australia), Tectonics & Structural Geology, Geological Society of Australia, July 2007

Professional affiliations

Webmaster of Ancestrais Capoeira (2007-2008)
President of the UWA Association of Mechatronics Engineers (2007)
Social Engineer of the UWA Association of Mechatronics Engineers (2006)
Vice-President of the UWA Computer Science Students Club (2006)
Ordinary Committee Member in the UWA Computer Science Students Club (2005)

Interests

Soccer, Martial Arts, Rock Climbing, Capoeira, Open Source Software, Machine Learning, Space, Translation, Snow Boarding, Linux, Android, Travelling, Languages, Cultures.