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

Skills

Languages	English (Native), Japanese (Basic), Korean (Basic)
Operating Systems	Linux, UNIX, Mac OS X, Windows XP/7
Programming	Java, Python, C (Highly Proficient)
	C++, C#, MATLAB, JavaScript, PHP, xHTML, CSS, MySQL (Proficient)
Theory	Algorithms, Artificial Intelligence (AI), Machine Learning, MultiAgent Systems (MAS), Computer Vision, Visualisation, Parallel Computing
Familiar Platforms	.NET, Gumstix (OMAP3430), Stellaris microcontrollers, Android
CAD Software	Autodesk Inventor, SolidWorks
Office Software	MS Word, LaTeX, OpenOffice/LibreOffice
Engineering	Robotics, Embedded Systems
Mathematics	Linear Algebra, Multi-Variable Calculus, Probability & Statistics, Control Theory

Experience

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

- Jointly implemented the ground control manager for configuration and control of unmanned aerial vehicles. This is written in Java Script & PHP and interfaces with the ground control server across a network.
- Jointly implemented the JAVA prototype for the ground control manager.
- Designed and wrote the firmware and boot loaders for our peripheral devices that transcode data from company UDP and CAN protocols to interface with transmitters and other third party devices using C and the Code Sourcery toolchain.
- Analysis of data/prototyping in Python; Data stream conversion in C#.

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

- Processed accelerometer data in Python to ensure vehicles met vibration requirements.
- Implemented some visualisation software using Visual C#.
- Improved the pattern matching algorithm for brake pad detection using Python.
- Used Visual C++ to remove noise during the post processing of objects in laser scanning 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; motivation of others; integrating into new 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.

Tutor **July 2007 - November 2007**
University of Western Australia

- Tutored: Modelling and Computing Analysis for Engineers; Mechatronics Systems; Java.
- Required a detailed knowledge of MATLAB, LabVIEW and Java.
- Duties: teaching, lab demonstrating and marking.

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

- Analysed the directional variation of roughness across a rock surface.
- Continuing from iVEC work and Eventuating in a paper.

iVEC Intern **December 2006 - March 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.

Education

Bachelor of Engineering

Completed 2011

Institution The University of Western Australia

Majors Mechatronics

Mechatronics 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; C; Python; hardware; OpenEmbedded; SPI; LabVIEW; Networks.

	Algorithms for AI	Distinction
	Embedded Systems	Distinction
	Algorithms	Distinction
	C Programming	Distinction
	Foundations of Computer Science	Distinction
	Robotics and Automation	Credit
	Real-time Distributed Computer Systems	Credit
	Concurrent Programming	Credit
	Computer Architecture	Credit
	Operation Systems	Credit
Units:	**Professional Computing**	Credit
	Mechatronics Systems	Credit
	Advanced Control Engineering	Credit
	Control and Mechatronics	Credit
	Manufacturing	Credit
	Software Engineering Design	Credit
	Engineering Dynamics	Credit
	Intro Elec. Eng.	Credit
	Intro Mech. Eng.	Credit
	Software Engineering 104	Credit
	Object Oriented Programming	Credit

Computer Science with Honours

Completed 2006

Institution The University of Western Australia

GPA (WAM) 6.00 (74.13)

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.

	Computer Vision	High Distinction
Units:	**Scientific Communication**	High Distinction
	Visualisation	High Distinction

Secondary Education

1999-2001	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
2000: Australian Mathematics Competition High Distinction
1996: Citizenship Award

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.