

# DAVID GOY

*Full Stack Web Developer & Application Support Engineer*

*BEng(Hons), DipIT(Distinction), DipEng(Merit)*

Site: [davidgoy.dev](http://davidgoy.dev) | Projects: [github.com/davidgoy](https://github.com/davidgoy) | Email: [david@davidgoy.dev](mailto:david@davidgoy.dev)

## Development stack

- **Operating system:** Linux
- **Front-end:** JavaScript, HTML, CSS
- **Back-end:** PHP, MySQL
- **Frameworks:** Bootstrap, CodeIgniter
- **HTTP API:** REST
- **Web server:** Apache HTTP Server
- **Shell scripting:** Bash
- **Version control:** Git

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## Projects

- **Reflect** (<https://github.com/davidgoy/reflect>)  
Static site generator for WordPress.

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## Awards

- **US patent 8612100 for invention of vehicle management control system** (2013)
  - Enables an entire vehicle to be controlled by a single software framework running on macOS, Linux or Windows computer
  - Invented during time as a PhD research student at *The University of Sydney*
- **The NEC Semiconductors Singapore Pte. Ltd. Award for Best Project Work** (2000)
  - Software written in C that enabled engineers to simulate the dynamic performance of micromouse robot without having to build a physical prototype
  - Created during time as a Diploma in Mechatronics Engineering student at *Nanyang Polytechnic*, Singapore

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## Businesses

- **Full Stack Web Developer** (2011 - Now)  
*Self-employed*

Specialising in the development of complex web applications using LAMP stack (Linux, Apache, MySQL, PHP) and JavaScript.

- **Founder** (2006 - 2013)  
*Goy Advanced Automobile*
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Australian electric vehicle startup. Joined by more than 10 Australian and international team members. The startup did not succeed. However:

- Successfully raised first round of funds to pay for consultation with *Lotus Engineering*
  - Vehicle designed by team was featured in *Top Gear Australia* magazine, *Auto Salon* magazine, *Sydney Morning Herald* newspaper and *The Age* (Melbourne) newspaper
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## Employment

- **Application Support Engineer** (2018 - Now)

*States of Guernsey* (then later transferred to *Agilisys Guernsey*)

Supports the applications used by various States of Guernsey departments including Policy & Resources, Economic Development, Employment & Social Security, Environment & Infrastructure, Health & Social Care and Home Affairs.

Good level of experience with: Microsoft 365 apps, Windows Server, SQL Server, Active Directory and PowerShell.

- **Manufacturing Engineer** (2004 - 2007)

*Silverbrook Research Pty. Ltd.*, Australia

Researched and implemented mass production methods that could be potentially used to manufacture an ultra-high speed printhead developed by the company.

### Achievements

- Developed a solution to clean one of the key components that improved the part's yield from approx. 50% to nearly 100% at the cleaning stage of the manufacturing process
- Improvised a solution to remove unwanted residue from a key component's coating, increasing yield from approx. 8% to 90% at an important stage of the manufacturing process and resulting in significant time and cost savings

- **Associate Engineer** (2000 - 2001)

*Chartered Semiconductor Manufacturing Ltd.*, Singapore

Lithography/process department:

Troubleshoot process and machine related issues in the production line, performed quality checks on silicon wafers and develop strategies to minimise defects/increase manufacturing yield.

IPM layout/test structure department:

Drafted semiconductor structures using CAD tool for new test module designs.

### Achievements

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- Lithography/process department:  
Successfully implemented new program criteria for automatic defect detection, significantly reducing errors/false alarms and thus production down time by approx. one hour per day
  - IPM layout/test structure department:  
Developed software that automated the drafting of semiconductor structures, enabling the department to produce a month's worth of component design drawings in less than five hours
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## Education

- **Doctor of Philosophy (Engineering and IT) by Research - Withdrawn**  
*The University of Sydney, Australia*

Conducted research on software system that will allow an entire vehicle to be controlled by a single CPU as opposed to the conventional method that requires a multitude of CPUs. Withdrawn from PhD program in 2013 to focus on business.

- **Bachelor of Engineering (Materials and Mechanical Systems) with Honours (2004)**  
*The Australian National University, Australia*
  - Faculty of Engineering and IT Student Services First Year International Scholarship (2002)
- **Diploma in Information Technology (Website Development) With Distinction (2011)**  
*TAFE NSW, Australia*
  - 26 distinctions
- **Diploma in Engineering (Mechatronics) with Merit (2000)**  
*Nanyang Polytechnic, Singapore*
  - 15 distinctions
  - Top 10% of the graduating cohort for the diploma course
  - Sponsorship under *Chartered Semiconductor Manufacturing Ltd.* (1999 – 2000)
  - Top Student Award, Mechatronics Engineering (1999/2000)
  - Top Student Award, Mechatronics Engineering (1998/1999)
  - The NEC Semiconductors Singapore Pte. Ltd. Award for Best Project Work (2000)