



# DAVID MIN TAT GOY

*Full Stack Web Developer*

*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)

## Summary

Full stack web developer (LAMP) with a dash of sysadmin.

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## Development stack

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

- **Reflect** (<https://github.com/davidgoy/reflect>)  
Decoupled architecture website for headless WordPress, with built-in server-side rendering capability and static page generator.
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## Awards

- **US patent 8612100 for invention of vehicle management control system** (2013)
    - Invented during time as a PhD research student at *The University of Sydney*
    - Enables an entire vehicle to be controlled by a single software framework running on macOS, Linux or Windows computer
  - **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 SaaS (Software-as-a-Service) using LAMP (Linux, Apache, MySQL, PHP) stack and JavaScript.

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- **Founder** (2006 - 2013)  
*Goy Advanced Automobile*

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

- **Technical Delivery and Support - Applications** (2018 - Now)  
*States of Guernsey* then later outsourced to *Agilisys Guernsey*

Provided technical support for applications used by the States of Guernsey, including Microsoft 365 products and Windows Server.

- **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

- Lithography/process department:

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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)