

# Brett Terespolsky

*Electrical and Electronic Engineer*

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Driving License



*Give me six hours to chop down a tree and I will spend the first four sharpening the axe.*

ABRAHAM LINCOLN

## Objective

Hard-working, punctual, ambitious, fast-learner and eager to learn. Able to work on own initiative and as part of a team. Comfortable in leadership roles.

Looking for a position that will constantly challenge my abilities and utilise my skills in server management and/or R&D.

## Education

2002–2007

**School leaving certificate (IEB)**, *Yeshiva College of South Africa (High School)*, Johannesburg.

Prefect in Grade 9 & 12.

Five distinctions in grade 12.

Achieved full academic colours in grade 11 & 12.

Achieved half colours in chess.

2008–2011

**BSc Eng Electrical**, *University of the Witwatersrand*, Johannesburg.

Electrical engineering stream.

Made the Dean's list (top 10% of students in each degree) in 2008, 2009 & 2010. Received a certificate of merit in 2010 for Control. Summary of knowledge areas covered:

- Engineering skills and design
- Mathematics
- Physics
- Data structures & algorithms
- Electronics
- Electric & magnetic systems
- Software development and engineering
- Signals & Systems
- Microprocessors
- Electromagnetic Engineering
- Power Engineering
- Probabilistic system & signal analysis
- Control
- Economics of design
- High frequency techniques
- High voltage engineering
- Measurement systems
- Engineer in society
- Systems management & integration

Since 2012

**MSc Eng (by dissertation)**, *University of the Witwatersrand*, Johannesburg.

In the process of obtaining an MSc Eng by dissertation only in the field of lightning mathematical modelling and protection.

## Employment & Experience

2005–2007

**Salesman, Technical assistant (repairs), Car-o-cell Phones (part-time), Johannesburg.**

Tasks and responsibilities:

- Repair cellphones.
- Be familiar with all products available
- Be able to advise customers on the most optimal choice
- Customer satisfaction

Mar–Sep 2006

**Salesman, The Golfers Club (part-time), Johannesburg.**

Tasks and responsibilities:

- Be familiar with all products available
- Be able to advise customers on the most optimal choice
- Customer satisfaction

2007–2009

**Database administrator, Engineering consultant, Camp counsellor, Bnei Akiva (Community/Charity Work).**

Tasks and responsibilities:

- Maintain the Bnei Akiva database
- Train users of the database
- Design upgrades to the database software
- Maintain office network infrastructure
- Minimise downtime
- Migration of the entire database to an online system

Mar–Jun 2009

**Electrical engineering consulting intern, MKA/KKA House (part-time), Johannesburg.**

Tasks and responsibilities:

- Study of South African lighting and cabling legislature
- Application of studied material in the design Placed lightning, cabling, distribution boards, electrical outlets, etc on blueprints of a mall. Customer satisfaction

Since 2012

**Freelance contracting, Self-employed (part-time).**

Various tasks performed for various companies as listed below.

○ **Mann Made Media:**

Tasks and responsibilities:

- Research & development
- Design of a heart-rate monitor system (hardware and software)
- Coding done in Arduino and Processing
- Connect various systems for use in an exhibition

○ **Blapit:**

Tasks and responsibilities:

- Research & development
- Product feed aggregation from multiple online sources (Amazon, eBay, etc.)
- Populate database with the aggregated data
- Work on intelligent machine learning algorithms
- Design and analysis of end-to-end solution

○ **CBi-Electric:**

Tasks and responsibilities:

- Learn about and understand all types of circuit breakers and various techniques used in design and implementation circuit protection
- Produce application notes detailing time delay curves, Cascading, Selective co-ordination and various types of circuit breakers

○ **University of the Witwatersrand (Digital Arts department):**

Tasks and responsibilities:

- Setup IP Camera
- Create a live video feed accessible via a webpage
- Configuration of Dynamic DNS
- Domain management

Since 2012

**Chief Technical Officer (CTO)**, *Medical Assistive Technologies*, Gauteng.

Co-founder of Medical Assistive Technologies.

Tasks and responsibilities:

- Design of medical technologies
- Technical documentation
- Pitching to investors
- Assist my business partner with all the general administration of the company

## Skills and Tools

Proficient or familiar with a vast array of programming languages and technologies, including:

### Development

|                   |                                                                                                                                                         |           |                                                   |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------|
| Languages         | C, C#, C++, Java, Python, Ruby, Perl, Visual Basic, SQL, Processing, Arduinos, $\text{\LaTeX}$ , MATLAB/Octave, Mathematica, Shell/Bash, Ruby, GNU Make | Web       | HTML/XHTML, CSS, JavaScript, JQuery, PHP          |
| Frameworks        | Django, Google AppEngine                                                                                                                                | Databases | MySQL, PostgreSQL, SQLite                         |
| Formats           | XML, HAML/YAML, JSON                                                                                                                                    | Methods   | Object Oriented Programming, MVC, Unit Tests, UML |
| Source Management | SVN, Git, Mercurial                                                                                                                                     | Tools     | Doxygen, GitHub                                   |

### Systems and Networks Administration

|                   |                                                         |           |                           |
|-------------------|---------------------------------------------------------|-----------|---------------------------|
| Web               | Apache, Nginx, Wordpress, PHPBB                         | Mail      | Postfix                   |
| Operating Systems | GNU/Linux (Debian, Ubuntu, LinuxMint), MacOS X, Windows | Databases | MySQL, PostgreSQL, SQLite |
| Virtualization    | VMWare                                                  | Security  | SSL, OpenSSH              |

### Office and tools

|              |                                                          |                    |                                                                      |
|--------------|----------------------------------------------------------|--------------------|----------------------------------------------------------------------|
| Office       | OpenOffice/LibreOffice, Microsoft Office, Gimp, Inkscape | Project Management | Asana, Trello, GanttProject                                          |
| Productivity | Mind Maps                                                | Edition            | $\text{\TeX}$ , $\text{\LaTeX}$ , $\text{\XeTeX}$ , $\text{\LuaTeX}$ |

### Specific Skills

- Research & development
- Database administration
- Strong technical skills
- Mathematical Modelling
- Eliciting Requirements
- Testing & Validation
- Server management
- Strong written and verbal communication skills
- IT Fluency
- Object-Oriented Analysis
- Decomposing the Abstract into Details
- Problem Solving

## Awards & Achievements

2005

**First Aid Course (Level 1)**, *Yeshiva College of South Africa*, Johannesburg.

2008–2010

**Dean's List**, *University of the Witwatersrand*, Johannesburg.

2010–2013

**Invited to attend four global Youth Leaders Conferences (ISLP)**.

2011

**Certificate of Merit in Control I**, *University of the Witwatersrand*, Johannesburg.

2012

**Part of the organising committee of PowerAfrica 2012 conference**, *University of the Witwatersrand*, Johannesburg.

- 2012 Attended an IEEE SBC leadership conference, Madrid.
- 2012 Wrote a paper for and presented at ICHSIP (a conference on high speed imaging and its applications), Pretoria.
- 2012 Won the best student paper award at ICHSIP30, Pretoria.
- 2012 Founded Medical Assistive Technologies.
- 2013 Won (as Medical Assistive Technologies) the ORTJET business plan competition, Johannesburg.
- 2013 Won (as Medical Assistive Technologies) the GAP Medical competition, Pretoria.

## Memberships

- Since 2009 Member of the Golden Key International Honour Society.
- Since 2009 Member of the IEEE.
- Since 2012 Member of the SAIEE.
- 2011 IEEE Wits Student Branch Committee Member (Webmaster), *University of the Witwatersrand*, Johannesburg.
- 2012 Appointed chairperson of the IEEE Wits Student Group, *University of the Witwatersrand*, Johannesburg.
- 2012 Introduced the SAIEE into the university at a student level forming the SAIEE-IEEE Wits Student Group, *University of the Witwatersrand*, Johannesburg.
- 2014 Started volunteering for the IEEE SA Section.
- 2014 Started as volunteer for the SAIEE.

## Interests

- o Coffee
- o Music
- o F1
- o Gym and health
- o Cars
- o New technologies
- o Computers
- o Servers

## Foreign Languages

|           |                    |                                        |
|-----------|--------------------|----------------------------------------|
| English   | Native             | Mother Tongue                          |
| Afrikaans | Good Level         | Occasional practice, Studied in school |
| Hebrew    | Intermediary Level | Studied in school                      |
| Russian   | Beginner           | Studying alone                         |

## References

References available upon request.