

# Brett Terespolsky

*Electrical Engineer, Entrepreneur*

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*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 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

2012-2014

**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

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

○ **University of the Witwatersrand/Anglo American:**

Tasks and responsibilities:

- Setup a database system for large quantities of fuel cell data
- Create a front-end system for graphing different data

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## Skills and Tools

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

### Development

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

### Systems and Networks Administration

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

### Office and tools

<b>Office</b>	OpenOffice/LibreOffice, Microsoft Office, Gimp, Inkscape	<b>Project Management</b>	Asana, Trello, GanttProject
<b>Productivity</b>	Mind Maps	<b>Edition</b>	$\TeX$ , $\LaTeX$ , $\XeTeX$ , Lua $\TeX$

### 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

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## 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.
- 2014 Was a finalist (as Medical Assistive Technologies) the World Innovation Day, Geneva.
- 2014 Presented at the International Conference on Lightning Protection, Shanghai.

## 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

- Coffee
- Music
- F1
- Gym and health
- Cars
- New technologies
- Travelling
- 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.