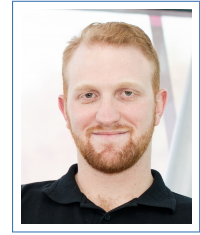# Brett Terespolsky

*Electrical Engineer, Entrepreneur*

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 *github.com/bteres*
*Driving License*

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

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## Summary

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 and management.

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

**2012–2015**

**MSc Eng (by dissertation)**, *University of the Witwatersrand (part-time)*, Johannesburg.
Completed a dissertation in the field of lightning and mathematical modelling. The dissertation is titled: *An Approximation to the Heidler Function with an Analytical Integral for Engineering Applications Using Lightning Currents*. The research included the development of a function that can be used in the design of lightning protection systems. The equation developed in the dissertation differs from the standardised models because it can be integrated. This allows for further analysis of lightning protection systems and lightning events. A copy of the dissertation can be made available on request.

# Employment & Experience

**Consultant**, *Revenue Science part of the Cyest Corporation*, Johannesburg.

Performed the roles of: developer, deployment engineer, technical lead, solutions architect, analyst and project manager.

Tasks and responsibilities:
- Web application development (client and server)
- Data analysis
- Server setup for application hosting
- Application support
- System architecture and infrastructure design
- UI design
- Engagement and maintenance of client relationships
- Project management of small and medium sized teams
- Budget planning and resource allocation
- Compose and negotiate client contracts

**Hardware/Software engineer**, *Mann Made Media*, Johannesburg.

Tasks and responsibilities:
- Website design and development
- Development of back-end systems (APIs)
- Design and building of WiFi hotspot portal (hardware and software)

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

Co-founder of Medical Assistive Technologies, a company founded with the purpose of developing innovative, affordable medical equipment/software. The company started as a spin-off from our final year project.

Tasks and responsibilities:
- Design of medical technologies
- Technical documentation
- Compilation of business plans and investor presentations.
- Pitching to investors
- Assist my business partner with all the general administration of the company

**2012–2014**

**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

**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

**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

**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

## Skills and Tools

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

## Development

| | | | |
|---|---|---|---|
| **Languages** | VBA, R, NodeJS, C, C#, C++, Java, Python, Ruby, Perl, Visual Basic, SQL, Processing, Arduinos, LaTeX, MATLAB/Octave, Mathematica, Shell/Bash, Ruby, GNU Make | **Web** | HTML/XHTML, CSS, JavaScript, JQuery, PHP, AngularJS, SASS |
| **Frameworks** | Django, Google AppEngine, All third party APIs | **Formats** | XML, HAML/YAML, JSON |
| **Methods** | Object Oriented Programming, MVC, Unit Tests, UML | **Source Management** | SVN, Git, Mercurial |
| **Tools** | Doxygen, GitHub, Grunt, Gulp, Yeoman, PM2 | | |

## 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, OpenTSDB, SQL Server |
| **Virtualization** | VMWare | **Security** | SSL, OpenSSH, OpenVPN |

## Office and tools

| | | | |
|---|---|---|---|
| **Office** | OpenOffice/LibreOffice, Microsoft Office, Gimp, Inkscape, Microsoft Excel Certificate | **Project Management** | Asana, Trello, GanttProject, Wrike, Pivotal Tracker |
| **Productivity** | Mind Maps | **Edition** | TeX, LaTeX, XₑTeX, LuaTeX |

## Specific Skills

- Research & development
- Database administration
- Strong technical skills
- Mathematical Modelling
- Eliciting Requirements
- Testing & Validation
- Project Management

- Server management
- Strong written and verbal communication skills
- IT Fluency
- Object-Oriented Analysis
- Decomposing the Abstract into Details
- Problem Solving
- Client Relationships

## 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. |
| 2015 | **Member of the winning team of the Barclays Data Wars hackathon**, Johannesburg. |

## Memberships

| 2009 | **Member of the Golden Key International Honour Society.** |
| 2009 | **Member of the IEEE.** |
| 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
- F1
- Cars
- Travelling
- Music
- Gym and health
- New technologies
- 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.