

# JAKE PENCHARZ

6 Queen Rd, Rondebosch  
Cape Town  
South Africa  
☎ (+27) 83 895 4595  
✉ jake.jay.p@gmail.com

## Personal Statement

I intend to make a positive and wide spread change to the world during my life time. Based on the world's current innovators it seems that one of the most effective approaches to reaching this goal is to be proficient in multiple disciplines. This tactic is one that resonates with me since I have always showed interest in different realms, ranging from maths and the sciences; to art and music. With this goal in mind I have tried to attain skills and knowledge from an array disciplines, focusing mainly on Electrical Engineering, Computer Science, and Medicine. I believe that this skillset positions me to be able to make an impact in South Africa and possibly the world at large. In a world that is changing at unprecedented speeds, it is imperative that I continue to learn and push the boundaries of my knowledge so that I can contribute to the direction of that change.

## Experience

### 2018–2019 Internship at Isazi Consulting,

*Isazi is a small but prominent data analytics company in Johannesburg that specialises in machine learning and optimisation. I spent eight weeks there working as a software developer to make tools that would integrate with their machine learning models.*

## Education

Studying engineering has only increased my fascination with the world around me. It has given me a strong background in maths, many of the sciences, and in programming.

### 2017–present BSc in Electrical and Computer Engineering, University of Cape Town.

- Final year project involved developing a machine learning approach to translate English to South African Sign Language. Translations were done using a state of the art encoder-decoder architecture.
- Aggregate exceeding 80 % for the first two and a half years of study

### 2014–2016 BEngSc in Biomedical Engineering, University of the Witwatersrand.

- Graduated with distinction
- Selected for Deans List in 2015, 2016 (top 10% of students, with a minimum of 75% aggregate)
- Awarded the 'Undergraduate University Council Merit Scholarship' in 2015 and 2016
- Awarded the 'University Entrance Scholarship' in 2014

### 2001–2012 IEB Matric Certificate, King David Victory Park, Johannesburg.

- Matriculated with distinctions in all 10 subjects taken, with an aggregate of 88%
- Matriculated in the IEB's top 1% countrywide for English, Mathematics, and Visual Arts
- Placed on the Commendable Achievement list for ranking in the country's top 5% in five subjects

## Non-academic Achievements

### 2015 Cluster Computing Competition.

- Reached the final round in the cluster computer design competition for the Center of High Performance Computing in South Africa.

### 1999–2011 Japanese Karate Association at Honbu Dojo.

- Represented the South African All Styles team in Venice, Italy (2010).

- 2008–2012 **School Public Speaking.**
- Member of the senior impromptu public speaking team from 2010-2012.
  - Won best senior public speaker in 2011.
- 2011 **Global Young Leaders Conference - Mock United Nations.**
- Was elected to represent the South African team at the final mock conference.
- 2011–2012 **Elected School Prefect.**
- Elected as the head of Environment Committee.
- 2013–present **Running.**
- Non competitive runner partaking in races recreationally. Two Oceans Half Marathon 2017, 2018

## Skill Set

### Programming Skills.

- Proficient in: C++, Java, Python, Matlab,
- Familiar with: HTML, CSS, Javascript
- Android App Development

### System Design.

- Embedded system design and implementation (Arduino ecosystem, PIC16, STM32f0)

### Document Processing.

- Latex, Microsoft Office Suite

## Other Interests

### Habonim Dror Youth Movement.

An active member of Habonim Dror Youth Movement from 2008-2012, and a counsellor from 2012-2017. Habonim Dror is a pluralist Jewish youth movement which also focuses on service to humanity and social upliftment. It has therefore built strong ties to organisations like Equal Education. Furthermore, many of its members work in NGOs across the country. It aims to offer Jewish youth unbiased education on issues pertaining to Israel and modern society, with the hope of catalysing social reform. In order to gain a deeper understanding of the conflict in the middle east and to hone the skills required to be a counsellor, I attended a gap year program run by this movement in Israel (2013).

### Travelling.

It is important to me that I try to understand and engage with different people around Southern Africa and the world as it lends perspective on my own lifestyle. Aside from a year spent in Israel, I spent two months traveling Peru and Ecuador (2015); and two months in India (2016). I have also had the opportunity to spend time in Mozambique, Kenya, and several European countries.

### Rock Climbing.

Like many, I crave being outdoors. I find that rock climbing is an excellent way to get out and explore. It is a new hobby of mine but I have found it extremely rewarding both socially and as a form of exercise.

## Reference Contacts

Name	Position	Contact details
Dr. Elizabeth Leaver	King David High School, Head of English Dep.	elizabeth.leaver@za.org
Prof. David Rubin	Adjunct Professor and Head of the Biomedical Engineering Research Group at WITS	david.rubin@wits.ac.za
Kerren Ortlepp	CHPC mentor	kerren.ortlepp@gmail.com