

Josh Stein



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About

MSc Biomedical computing graduate with interests in artificial intelligence, alignment, biomedical computing, teaching and magic. I'm a curious and driven person, who enjoys being immersed in difficult problems. When I'm not working/teaching I enjoy reading, swimming, surfing and hiking.

Education

Technical University of Munich Oct. 2020 – Oct. 2023

MSc in Biomedical Computing - my final thesis was focused on cardiac MRI segmentation and achieved publications in MICCAI and BVM.

University of Cape Town

Jan. 2016 – Nov. 2019

BSc in Electrical and Computer Engineering

University of Cape Town

Jan. 2014 - Nov. 2015

MBChB in Medicine

Work experience

Software Engineer - Mathigon/Amplify Education Mar. 2021 - Present

Mathigon (acquired by Amplify Education) is an ed-tech startup dedicated to making maths more interactive, playful and fun.

My work has focused on building interactive tools for the Polypad, an interactive whiteboard used by $\approx 500k$ users a month.

I have thoroughly enjoyed my work, and being able to contribute to values I align with so strongly. Mathigon is making a significant impact on the landscape of digital education, shaping the way for how teachers can make maths more fun and engaging.

Recurse Center

Mar. 2024 - Jul. 2024

I spent 3 months at the Recurse Center, a self-directed learning program designed to encourage programmers to follow their curiosity and work at their limits. I worked on [several interesting projects](#), including hacking a rotary phone, AI sign-language detection, AI safety, and various smaller projects.

Software Engineer - Avelios Medical GmbH Oct. 2022 - Jan. 2023

Avelios is working towards replacing outdated hospital infrastructure with modern, modular software. I firmly believe in the vision of making hospitals more efficient and helping build software that allows physicians to focus on the patient experience, rather than data entry.

Teacher - College of Magic Jan. 2015 - Sept. 2020

Volunteer teacher of magic, illusions, performance theory and showmanship. I have taught students aged 9-17. Finding myself in multiple positions of mentor-ship, I have tried my best to nurture and guide students, cultivating their love for magic and their skills as performers.

Responsibilities have included managing multiple curricula, creating and running lessons, training students, assisting teachers, performing magic and managing events.

Software Engineer - Agrigate One Mar. 2020 - Sept. 2020

I gained extensive experience working with a small team contributing to a platform dedicated to aggregating and interpreting all data points across the fresh produce supply chain.

Working on small team was fulfilling, and allowed me to make significant contributions to improve the platform and user experience. I enjoyed being given autonomy in my work and working closely with more experienced developers. Specific technologies used: Ruby on Rails, Angular, Heroku, Postgres and Git-Lab.

Software Engineer Intern - Amazon Web Services Nov. 2019 - Feb. 2020

3 month internship working on back-end support. I chose to work primarily in Python, although was exposed to some Ruby and Java. I gained familiarity and competence with many native AWS services, including Lambda, Step functions, CloudWatch, API Gateway, etc.

Software Engineer Intern - Superbalist Jun. 2018 - Jul. 2020

Interned for 4 weeks, working with the Growth team. We were responsible for attracting new customers to the platform and achieving higher conversion rates of existing customers. I worked on an internal web app that allowed for hyper-targeting of users. Worked on front-end and back-end aspects of the project, using a combination of Python (Django), HTML, Javascript and Zephyr.

	<p>Tutor Jan. 2014 - Jan. 2017</p> <p>I started Eureka Tutors, a private company aimed at providing top quality tutors to students in need. I have tutored maths, physical sciences, life sciences, information technology and computer science to learners from Grade 8 to 1st year university.</p>								
Publications	<p>Stein, Josh, Maxime Di Folco, and Julia A. Schnabel. "Sparse annotation strategies for segmentation of short axis cardiac MRI." International Workshop on Statistical Atlases and Computational Models of the Heart. Cham: Springer Nature Switzerland, 2023.</p> <p>Stein, Josh, Maxime Di Folco, and Julia A. Schnabel. "Influence of Prompting Strategies on Segment Anything Model (SAM) for Short-axis Cardiac MRI Segmentation." BVM Workshop. Wiesbaden: Springer Fachmedien Wiesbaden, 2024.</p>								
Volunteer experience	<p>Tutoring program at College of Magic</p> <p>Initially, I started tutoring two students with maths and physical sciences. Several students then began approaching me, asking for more help. Subsequently, I started a volunteer tutoring program aimed at helping current College of Magic students with ongoing schoolwork, with a focus on STEM subjects.</p> <p>Volunteer teaching Nov. 2016 - Jan. 2017</p> <p>Volunteered as a teacher to assist with Maths and Physical Sciences for Axium Education in the Eastern Cape, South Africa.</p> <p>First line healthcare Jun. 2015 - Jul. 2016</p> <p>Volunteered at clinics around Zithulele, Easter Cape delivering first line healthcare (pap smears, BP tests, heart rate, glucose, HIV).</p>								
Honors	<table> <tr> <td>Graduated with first class honors (University of Cape Town)</td> <td>2019</td> </tr> <tr> <td>Dean's Merit list (University of Cape Town)</td> <td>2018</td> </tr> <tr> <td>Dean's Merit list (University of Cape Town)</td> <td>2017</td> </tr> <tr> <td>Dean's Merit list (University of Cape Town)</td> <td>2016</td> </tr> </table>	Graduated with first class honors (University of Cape Town)	2019	Dean's Merit list (University of Cape Town)	2018	Dean's Merit list (University of Cape Town)	2017	Dean's Merit list (University of Cape Town)	2016
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