Arie Roos

Software Developer
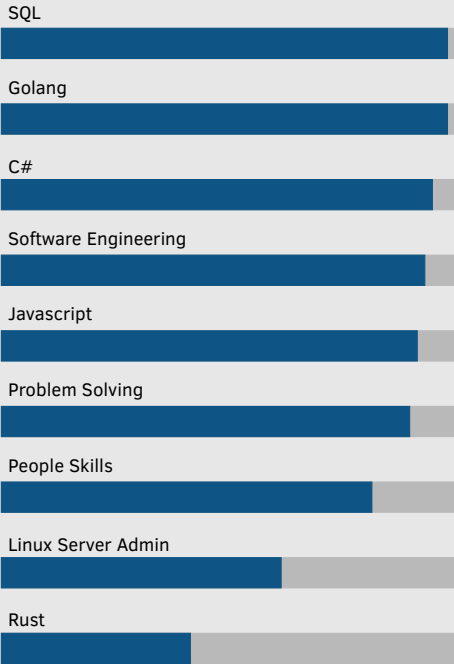
- 16 September 1989
- Pretoria, South Africa
- +27 78 423 7325
- github.com/arieroos
- arie@127development.com

About me

I am driven by finding simple and well-crafted solutions for complex problems. My love for code is also driven by my love for math, algorithms, and logical puzzles. I love exploring new ideas, and am always willing to learn. I work well in small teams where open communication is highly valued.

Skills

A half full bar indicates professional competence. A full bar indicates "no room for improvement".

- SQL
- Golang
- C#
- Software Engineering
- Javascript
- Problem Solving
- People Skills
- Linux Server Admin
- Rust

Interests

I am a thinker, I love Math, Puzzles, Theology, and Philosophy. I am also curious, and always appreciate new knowledge. I like to keep active and spend time in nature.

Experience

2024-Now Freelance Software Developer — 127development.com

I work on a variety of projects, from large web applications to simple script automations, and I am always looking for new challenges. Some highlights include:

- Developing a full file syncing application for Windows Desktop to make it easier for civil engineers to keep their files in sync in a way that integrates well with their custom processes and systems.
- Improving performance, security, and maintainability for the server of a complex web application.
- Improving the performance of a complex harvest forecasting model by 99%, by improving the model's usage of the numpy library.

I gained experience in client relations, C#, Java, Kotlin, Python, Javascript, MySQL, SQLite, and Linux Server Admin.

2020-2024 Senior Software Developer — Direct Debit

I worked as lead developer on Direct Debit, a debit order system, and a solutions architect for PCI Vault, a PCI compliant credit card storage system. Some accomplishments include:

- Improving the usability and speed of the system by rewriting some SQL queries to massively improve performance.
- Reducing operating costs by quite a big margin. I did this by implementing a new payment processing back-end, which allowed for cheaper transaction processing.
- Scaling PCIVault to handle thousands transaction per second by rewriting the system to use a distributed database and serverless architecture. This also reduced operating costs to only a few dollars per month.
- Improving the usability and client retention of the PCIVault by implementing a custom documentation system, which allowed clients to use, test, and understand the APIs directly from their browser.

I gained experience in Golang, Python, Javascript, Svelte, PostgreSQL, Linux Server Admin, and AWS (Lambda and DynamoDB).

2018-2020 Software Developer — Itecho

We developed a product for automating the business and engineering processes of a ducting factory.

- I developed the parameterised models on the project, which included a lot of Mathematics and consulting with the client's mechanical engineers.
- I built a very nice library for computational geometry.
- On the frontend I built and displayed a few 3D models, and built user interfaces to record parameters for the models I developed.
- I wrote a genetic algorithm to improve nesting, we managed to reduce the client's offcuts by up to 25%.
- I helped to develop the MVC flow for the model parameters.

I gained experience in client relations, C#, .NET Core, EF Core, Javascript, vue.js, and PostgreSQL.

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2017-2018 Life Coach   *Self Employed*

I had my own life coaching practice. I worked with clients on a one to one basis to help improve their lives, and I also presented a few self-improvement workshops. I helped people to quit smoking, get their lives back on track after traumatising events, improve their social lives, etc. My work was non-technical, but I did learn a lot about people, leadership, motivation and public speaking.

2016-2017 DevOps Engineer   *Airvantage*

I moved to Airvantage when they bought my product and team from VAS-X. I picked up some development responsibilities after the move.

- I worked with the developers to get bugs fixed. I developed some of the patches myself. I investigated the other bugs, and communicated my findings to the developers, so that they could focus on the fix.
- I was responsible for reconciling our data with our biggest client's data.
- Analysing data to find meaningful information.
- Generating meaningful reports using SQL.
- I was on call every third week, in which I had to respond to after-hours issues within SLA times. And deploy patches at night when the systems were quiet.
- I interfaced with corporate clients often, making sure to complete the necessary documentation for every issue or patch.
- I did a lot of second line support tickets.

I worked for an excellent CTO, who encouraged us to automate our work. I gained a lot of experience in SQL (in Oracle).

2014-2016 Support Engineer   *VAS-X*

I was part of the team running an Airtime Advance System at multiple telecom companies. My duties included mostly operational work, 2nd-line support tickets, generating reports from SQL, and regular interaction with corporate clients. I picked up a lof of SQL (in Oracle) and experience and wrote some awesome SQL queries.

2014 Software Developer   *iPLan Industrial Engineers*

At iPlan I wrote extensions and interactions for Syspro(an ERP System) using C#.NET. I also integrated a few Excel sheets with Syspro, using VBA.NET. I also gained experienced with MS SQL

2012-2013 Software Engineer   *Libralex*

At Libralex I worked on 2 projects, VetMaster and a product for remotely controlling geysers. Vetmaster was a legacy project that I maintained, supported and expanded. I developed the geyser control system from scratch, and wrote a lot of concurrent code for it. I was solely responsible for both projects.
I gained experience in VB.NET, C#.NET and MS SQL

2010-2011 Tutor   *Stellenbosch University*

While studying I created value by tutoring younger students. I also did various jobs during university holidays.

2008 Camp Facilitator   *Wortelgat Outreach Trust*

Between school and university, I spent a year working as a camp facilitator. I worked a lot with children and teenagers, teaching various soft skills through camp activities. During downtimes I helped with camp maintenance.
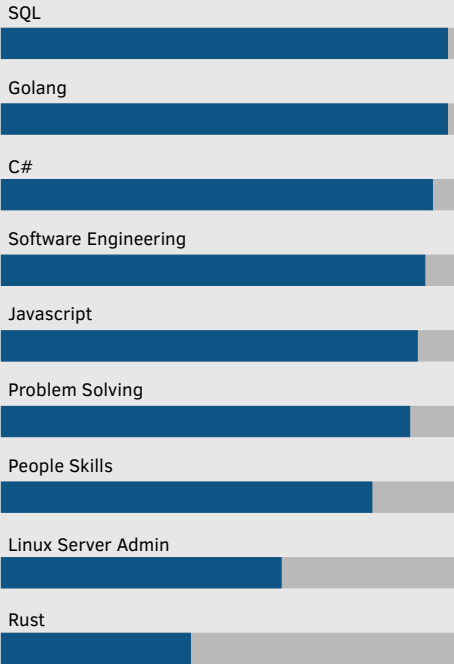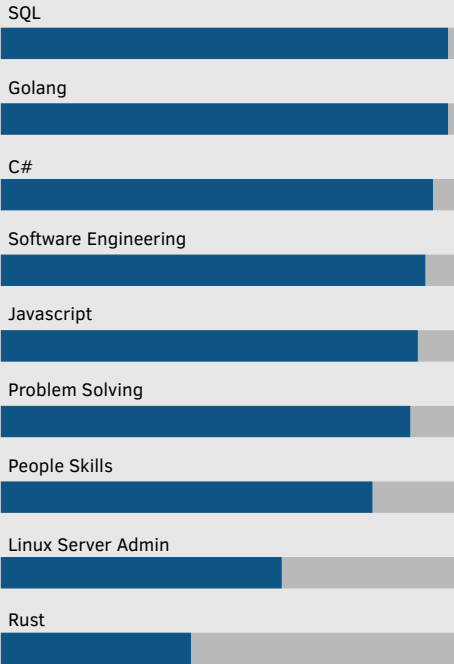
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2009-2012	B.Sc. Mathematical Sciences	Stellenbosch University
	Majoring in Computer Science	
2003-2007	High school	Brackenfell High School
	Computer Studies, Math, Science, Biology, English, Afrikaans	
2017	Life Coaching Certificate	New Insights (Distance Learning)
	A two-year course in Life Coaching including 50 hours of practical work.	

Personal Info

I am first and foremost a Christian. I take a heavy interest in theology, and in what it means to be a Christian. My family is also very important to me, and I will go to great lengths to ensure that I spend enough time with my wife and my son. I like the outdoors, so I often spend time walking my dog, mountain biking, or just enjoying nature with my family.