

Dr. Gaiye “Gail” Zhou

Career Path:

Next Role: Technical/Engineering Leadership Positions @ Microsoft

Principal Software Engineer (Mar 2024 – Present)

Sr Architect (Mar 2022 – Mar 2024, 2 years)

Architect (Jan 2017 - Feb 2022, 5 years and 1 month)



Gaiye "Gail" Zhou
a.k.a. Dr. Gail
Principal Software Engineer

- **My Home:** Atlanta, Georgia, USA.
- **My Hobbies:** Cooking, Reading, Landscaping, and Hiking.
- **My Passion #1:** Deliver innovative business solutions that are simple, scalable, extensible, and transformational.
- **My Passion #2:** I am relentless on innovation, automation, quality, consistency, and repeatable processes.

Prior to Microsoft (22 Years)

- **PhD** in Electrical and Computer Engineering and Executive **MBA** (Employer sponsored).
- **2 Awarded Patents** (7,139,722 & 6,925,586), and Many Innovative Solutions delivered.
- **Industry Knowledge:** Telecom, Government, Financial Services, Health Care, Retail, Manufacturing.
- **15+ Years** delivering **consulting Projects** with **repeating customers & projects**.
- **10+ Years leadership roles:** Director/VP/SVP.
- **3 years** as **Chief Architect** for US AF Supply Chain Modernization (\$140M Program).
- 15+ Years of Hands-on Experiences in **software engineering** (Bicep/Terraform/C#/Python/PowerShell/SQL/Java/C/C++)
- 2 Years in a **Start-up** building new product line later **acquired by GM**. Started my own company that served 3 corporations.

Journey @ Microsoft (Since January 2017)

Timeline (Joined Jan 2017)

- Dec 2021 - Present: Early Access Engineering Customer Innovation Program
- July 2023 – Mar 2024: Large Program Delivery, London Stock Exchange Group (LSEG)
- Dec 2020 - Mar 2022: Azure Analytics and AI Accelerators (AAP) Program
- Jan 2017 - Dec 2020: Azure Synapse Customer Success Engineering Program
- 60+ Customer Engagements, 5 GitHub Repositories, YouTube Channel, and other publications.
- Innovation Solution Accelerator Lead, **published IP**, links below:
 - ❖ "Intelligent Field Services", ([Intelligence Field Service Accelerators June 2023](#))
 - ❖ "Automate PDF forms Processing" ([AAC Article APR 2023](#))
 - ❖ "Azure PDF Form Processing Automation SA" ([PDF Form SA Oct2022](#))
 - ❖ "Azure Invoice Processing Automation SA" ([Invoice SA Mar 2022](#)).
- **Pioneered** APS/Netezza/Redshift/SQL Server to Synapse Migration w. Playbook & Automation.
- **Published** SQL Server to Synapse IP ([SQL2Synaspe2021](#)) with [YouTube Training](#).
- Led Coca Cola APS->Synapse Migration and created reusable IP ([APS2Synapse 2018](#)). This IP has been reused to migrate hundreds more APS to Azure Synapse. It is upgraded ([APS2Synapse2021](#)) with [YouTube Training](#). Led **Walgreens'** Netezza to Synapse Migration, delivered workshops & technical guidance till go-live: [Testimonials](#) and [Case Study](#).
- **Speaking Engagements:** MCAPS Airlift, GBB Airlift, Synapse Airlift, PASS, MSFT Spark, Future Data Driven Conference, and Microsoft Architect Communities.

Technical & Business Contributions



CONFERENCES / EVENT SPEAKER

- 2023: Microsoft Customer and Partner Solutions Conference: IoT Telemetry Anomaly Detection in D365 Field Services
- 2022: Microsoft AI/ML Airlift Conference: Azure PDF Processing Automation using AI/ML
- 2021: PASS Summit: SQL Server to Azure Synapse Migration
- 2021: Microsoft GBB Airlift: Business Case Development and Presales Process
- 2021: Microsoft Modern Data Warehousing in the Cloud Digital Event
- 2019: Microsoft Azure Air-Lift Conference Speaker on Azure Synapse Analytics

TECHNICAL CONTRIBUTIONS with GLOBAL IMPACT

- **Programming:** T-SQL, .NET, C#, Java, Python, Functions App, Logica App, PowerShell, Terraform, ARM, BICEP, and Azure CLI
- **Products:** IoT, Event Hub, Azure Digital Twins, Stream Analytics, Azure Synapse Analytics, Azure SQL, Cosmos DB, PBI, Dynamics 365
- **Solution Lead and Key Contributor:** Azure Synapse Scripts and Accelerators ([SynapseAccelerators](#)).
- **Solution Lead and Key Contributor:** MPP Assessment Process & Scripts ([MPP-Assessment](#)).
- **Solution Lead:** Intelligent Field Service Solution Accelerator (Github: [IntelligentFieldServiceSA](#)).
- **Solution Lead:** Automate PDF Forms Processing (Microsoft Engineering Article: [AutomatePDF](#)).
- **Solution Lead and Key Contributor:** Azure PDF Form Processing Automation Solution Accelerator (GitHub: [AzurePDFAutomationSA](#)), (YouTube: [Azure PDF Proc Automation](#))
- **Solution Lead and Key Contributor:** Azure Invoice Process Automation Solution Accelerator (GitHub: [AzureInvoiceProcAutomation](#)).
- **Solution Lead and Key Contributor:** Process and Scripts to automate SQL Server to Azure Synapse Migration ([SQL2Synapse Link](#)) with training videos ([YouTube Link](#))
- **Solution Lead and Key Contributor:** APS to Azure Synapse Migration ([APS2SynapseVersion1](#)) with Python Program ([code here](#)) translating APS code to run in Azure Synapse

Gaiye Zhou (Dr. Gail) - Professional Journey



Gaiye Zhou Hobbies - Cooking, Traveling, Landscaping, Hiking, Reading





Feedbacks From Microsoft Team Members (Jul 2022- Jun 2023, FY 23)

1. “Gaiye, you put dedication and perfection into any project you work on, it's been very consistent over the last two years. Your deliverables are always high quality. You are open-minded to learn new stuff as EAE is experimenting with many new things, this is essential for the team. Thanks for always being willing to jump into the unknown and roll your sleeves to help. You are a good team player. I know we all enjoy working with you and learning from you every day. You lead and have built two accelerators over the past few months, that's an incredible amount of work and achievement, as we all know how important the IP is to scale our business. Thank you!” – **Echo Wang, Leader, Early Access Engineering Cross Solution Customer Innovation Program (XSA CIP), APR 2023.**
2. “Gaiye – You are one of the most hardworking people I’ve come across. You are uncompromising about the quality of your work and consistently go above and beyond expectations. Your work across multiple solution accelerators has been invaluable. You are an incredible team player who is always willing to learn something new and lean in where needed. You are a joy to work with; your can-do attitude and positive energy are so appreciated and are contagious. Every engagement you're on is better as a result of you being involved. I admire your growth mindset and tenacity and am looking forward to continuing to work together” - **Jamie Helgeson, Program Manager, EAE XSA CI Program, Dec 2022**
3. “You are the best corporate citizen and collaborator! Thanks so much, Gaiye.” - **Julian Ostrow, Director, Production Empowerment, Bonsai/Autonomous Systems, Oct 25, 2022.**
4. Keep producing work for others to use. I admire how you...
 - Built and published reusable IP that both internal and external people are actively using. Continue to build and publish new IP
 - Give freely of your time to support the people, internal and external, who use these IPs once they are released to the world
 - Proactively anticipate and document points of confusion so that you can give these assets to others and scale your work without direct involvement
 - Attend to details and continue to learn new skills

- **Kenny Duenke, Sr. Consultant , Co-worker for EAE XSA CI Program, APR 2023**



Feedbacks From Microsoft Team Members (Jul 2021- Jun 2022, FY 22)

1. “You gently challenged me to go some extra mile. For example, create documentation for updated APS IP, record training videos for IP. That pushed me out of my comfort zone, learn new things, get new skills, and grow in my role. Brilliant example of 'contribute to the success of others” – **Andrey Mirskiy, AMA Architect, Microsoft, Jan 2022**
2. “Gaiye is amazing at creating IP, methodologies, and templates and presenting these with a broad audience to amplify their impact. I want to give her kudos on her work for the SQL to Synapse migration automation utilities with Director Murray Gordon for his project “Big Mac: Offering” – **Seth Daluga, GBB Dir Specialist, Microsoft, Jun 2021**
3. “Dr. Gail has an amazing attention to detail and providing a work product complete with the documentation necessary for anyone to pick up and execute. She is a rockstar talent!” – **Murry Gordon, Director of Business Strategy, Microsoft, Jun 2021**
4. “Your passions for the technology and focus on helping our clients is inspiring. You are so engaged in trying to fully understand their business and how you can help. Its infectious and great to see.” – **Scott Nichols, Account Executive, Microsoft, Mar 2021**



Feedbacks From Microsoft Team Members (Jul 2019 – Jun 2021, FY 21 & 20)

1. “You are such a knowledgeable person to not only Synapse but also many other technologies. In each meeting you are well-prepared, have an agenda to complete, address customer concerns/questions and let the ball rolling forward by planning for the next steps. Your technical abilities, professional interaction manners, and follow-up discipline on priorities is amazing.” – **Michael Amjadi, Sr. Cloud Solution Architect, Microsoft, Oct 2020**
2. “You are extremely knowledgeable and have many stories to share regarding customer examples and case studies which provide relevance and credibility.” – **Jodi Antoni, Sr Specialist, Microsoft, Feb 2020**
3. “Gaiye Zhou was a tremendous asset on the Neogrid engagement. When we began working on it, the project was in trouble, due to some latent product defects which were exposed by the customer's unique architecture and demanding requirements. Her deep technical expertise in data warehousing as well as thorough understanding of the customer's workload was instrumental in getting Neogrid' s cloud migration back on track, and then to successful completion. She is responsive and always available to assist, I look forward to the opportunity to work with her in the future.” – **Greg Smith, Principal Software Engineer, Microsoft, Feb 2020**



Feedbacks From Microsoft Customers

1. “On one hand the determination and technical knowledge of the Bruno Feldman da Costa other side with the Rodrigo Simas customer's vision and great care with quality, along with the Cristhian Neumann it was undoubtedly the people of #neogrid who had the competence for this achievement with great impact. We had so many other people who made this story happen and who were certainly recognized: Microsoft Gustavo Zimmermann, Greg Smith, **Gail Zhou**, and Paula Girao were key to the success of this delivery.” – **Sergio Grisa, Digital Transformation Manager, Neogrid, May 25, 2020 (LinkedIn Post).**
2. “Wanted to thank both of you (**Gaiye and Tammy**) for the excellent work on APS-to-Synapse POC project. The CSE team has successfully shown to EY that migration to Azure Synapse is possible. We appreciate answering our many questions on differences between APS and Synapse and related topics (sizing, backups, automation, etc.). We look forward to continuing to working with Microsoft until we have completed the migration off Dell APS appliances. – **Daren W Wager, EY Lead Architect, Data and Analytics**
3. “**Hi Gaiye**, I would like to thank you for the exceptional work you have done. As in the POC you have shown your commitment to us the customer in helping us as a true partner to reach our goals. It has been a pleasure working with you and I know my team would second this as they have been very impressed by the work and support that has been provided. I know this project will be a success due to the groundwork laid by you. Thank you and I very much appreciate the personal impact of your having to come to Australia for the launch and commencement of this work, and the amazing outcomes already in place for the delivery and go live of the Microsoft Azure environment. Thank you so much.” – **Lillian Nowak, General Manager, Data and Advanced Analytics, Coca Cola Amatil.**



Education

1. Education (PhD in Electrical & Computer Engineering, Executive MBA)

Engineering Education: **BS** in Automatic Control Engineering, **MS** in Electronics Engineering, **PhD** in Electrical and Computer Engineering, with a focus on Advanced Control Systems and **Applied AI**. **PhD Dissertation:** **Machine Learning**, **Fuzzy Logic**, **Simulated Annealing** applied to designing/tuning of control systems:

- [PID autotuner design using machine learning | Request PDF \(researchgate.net\)](#)
- [Fuzzy logic-based PID autotuner design using simulated annealing | Request PDF \(researchgate.net\)](#)
- [Automatic Design of Autotuners for PID Controllers - Gaiye Zhou - Google Books](#)

Executive MBA in General Management and Finance. Program Sponsored by Employer and completed while working full time.

2. Executive MBA: in Management and Finance.

Executive MBA in General Management and Finance. Program Sponsored by Employer and completed while working full time.

Prior to completing this program, I was a good software engineer and architect. After completing the program, I view the world with a business and end user perspective, with the disciplines of building an excellent operational process that can produce business results by providing value to users.