



# SRP Engineering Competency Matrix



A Journey Through Engineering Growth

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# ○ Muhammad Abdugafarov

26 y.o.

Team Lead at Silk Road Professionals

In programming since 2018



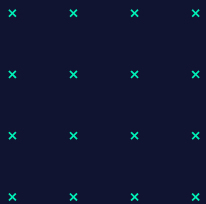
# Personal Journey

○ First line of code in 2015 (QBasic)

First production website 2018

Bunny hole of programming languages:

- Web (PHP, HTML, CSS, JS, WordPress)
- Mobile (Java, Swift)
- Full stack (VueJS, NodeJS)
- Backend (Python, Django, FastAPI)
- AI/ML (Python)
- Backend (C#, .NET)



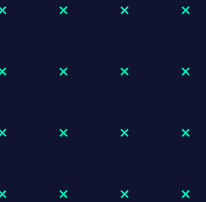
# Challenge #1

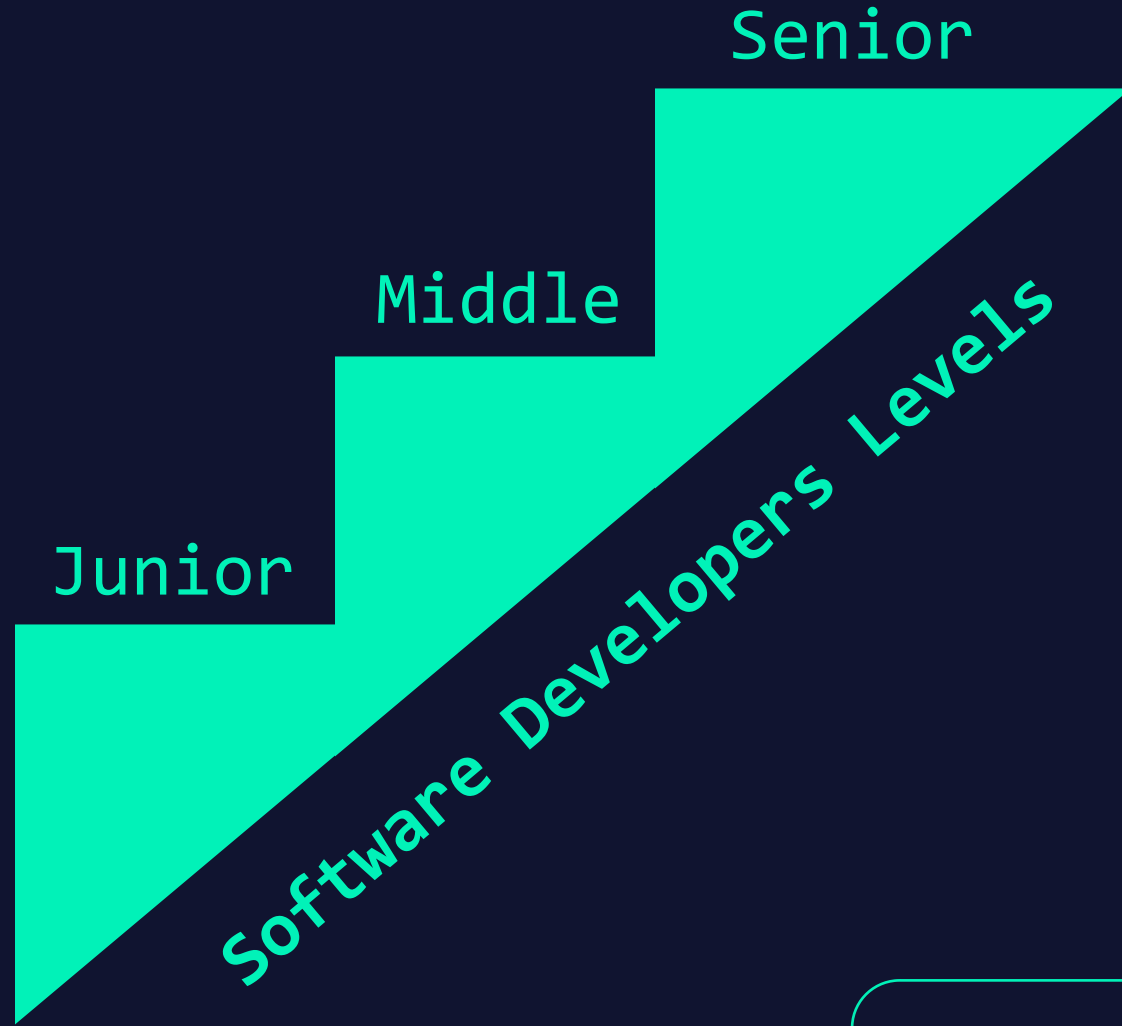




# Challenge #1

## The Technology Stack Maze



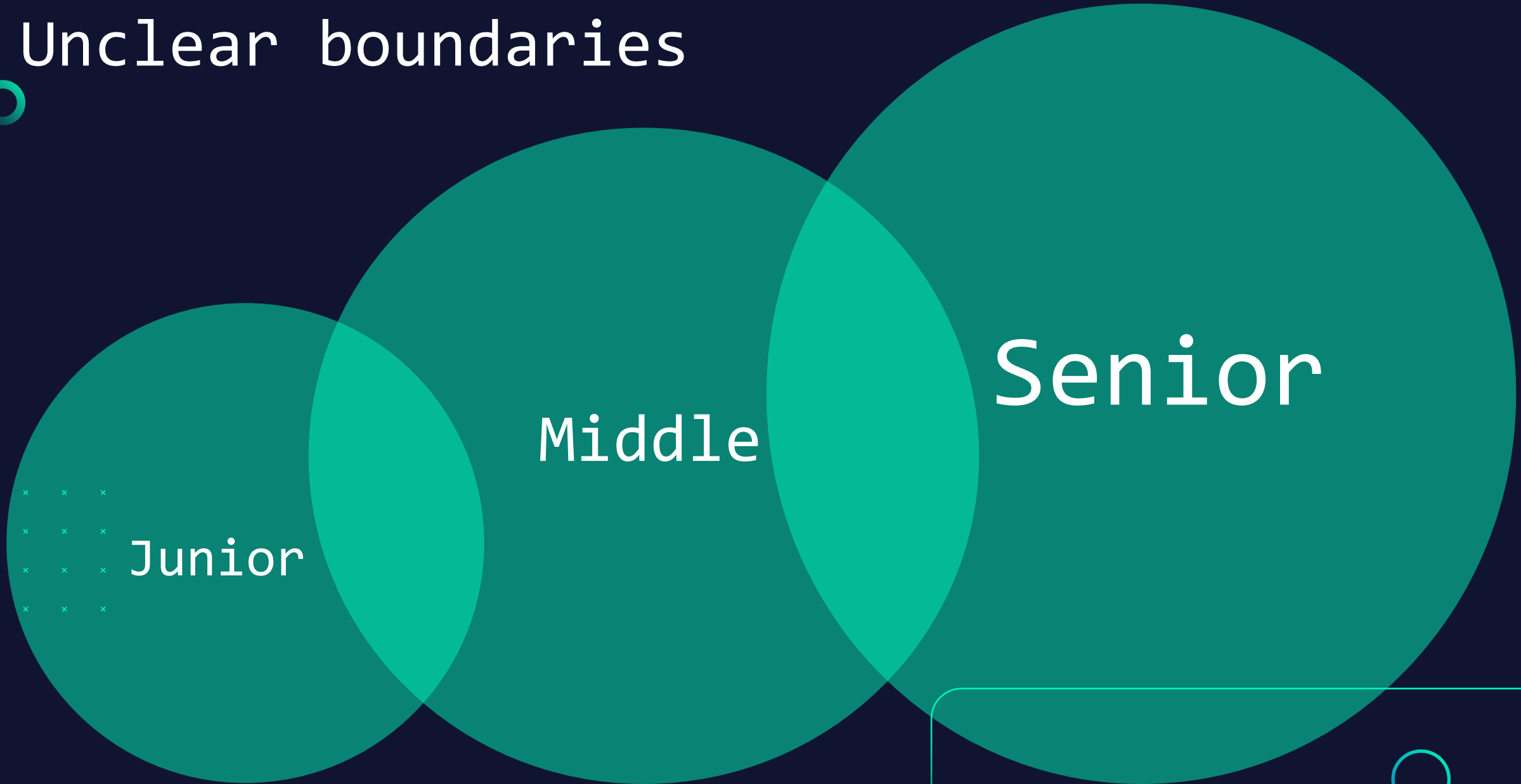


# Challenge #2





# Unclear boundaries



x x x x  
x x x x  
x x x x  
x x x x

Junior

Middle

Senior



# Even in international area

Google

Facebook

Apple

Amazon

Cisco

L3 SWE II	E3	ICT2 Junior Software Engineer	SDE I L4	Software Engineer 1 Grade 4
L4 SWE III	E4	ICT3 Software Engineer	SDE II L5	Software Engineer 2 Grade 6
L5 Senior SWE	E5	ICT4 Senior Software Engineer	SDE III L6	Software Engineer III Grade 8
L6 Staff SWE	E6	ICT5	Principal SDE L7	Software Engineer IV Grade 10
L7 Senior Staff SWE	E7	ICT6	Senior Principal SDE L8	Technical Leader 1 Grade 11
L8 Principal Engineer	E8	Distinguished Engineer	Distinguished Engineer L10	Technical Leader 2 Grade 12
L9 Distinguished Engineer	E9	Senior Distinguished Engineer		Principal Engineer Grade 13
L10 Google Fellow		Engineering Fellow		Distinguished Engineer
				Cisco Fellow

x x x x  
x x x x  
x x x x  
x x x x



# Challenge #2

## The Career Grade Mystery





How to solve these problems?



# Competency Matrix

	Anvar	Bobur	Said
.NET	4	5	1
C#	5	5	3
English	3	2	4
Communication	4	1	5





# Circle CI: Engineering Competency Matrix

Engineering Hiring! >

Lena Reinhard 2018 San Francisco CC BY-SA 4.0 License

A six-level engineering-focused framework from the globally distributed continuous integration and delivery experts. The framework was developed and introduced in 2018.

## Links from Circle CI



About



Matrix



Guidelines (PDF)



Introductory Blog Post



## Related Templates from Progression



Small Engineering Team

4 positions · 15 skills

Perfect for managing a small team of engineers

[View template >](#)



Medium Engineering Team

7 positions · 16 skills

Good for those looking to grow their engineering team to 20-30 people.

[View template >](#)

# Define required competency areas

## Step #1

- Technical skills



- Value

- Impact

- Leadership



Define competencies in each areas

## Step #2

### Technical skills

- Writing code
- Testing
- Debugging
- System Architecture
- Security





# Step #3

## Define grades

- Junior Software Engineer  
x x x x
- Middle Software Engineer  
x x x x
- Senior Software Engineer
- Staff Engineer



# Step #4

Fill expectation

## Grades

Competencies




# SRP Competency Matrix

	Level	SE1	SE2	SE3	SE4
	Title	Junior Software Engineer	Middle Software Engineer	Senior Software Engineer	Staff Engineer
	Focus	execution of work		facilitating, guiding, mentoring others in areas of work	
	Collaborative reach	Delivery of production-ready code with direction from the Team	Delivery of resilient and sustainable software from design to implementation and rollout	Independently delivers business impact within the Team or a cross team feature / capability	Sets the technical strategy for a Domain and delivers it through direct implementation or technical leadership
	Impact	Execution on defined tasks and contributing to solving problems with defined solutions. Primary focus is on improving own craft and skills as an engineer	Deliver well-scoped Features to achieve goals within the Team. Keeping customer needs in mind and leverage input from product to determine the right solutions to deliver customer value quickly Level up less-experienced members of my team by helping them with their craft, providing guidance, and leading by example	Leads and delivers complex features and products that require contribution from others, with ambiguous, open-ended problems to achieve goals within the Team. Keeping customer needs in mind and leverage input from product to determine the right technical solutions to deliver value quickly Level up less-experienced members of the Team by helping them with their craft, providing guidance, and leading by example	Demonstrate a high level of expertise in a particular platform, technology or product category that brings unique business value. Defines the tech vision for a Domain and leads delivery for large business-impacting products or features with multiple constraints Delivers product features and business goals spanning multiple Teams or multiple Domains.
Key Area	Competency	Competencies			
Technical Skills	Writing Code	Writes code with testability, readability, following style guides and naming conventions and accounts for edge cases and errors.	Consistently writes code that is easily testable, easily understood by other developers, and accounts for edge cases and errors.	Consistently writes code with testability, readability, following style guides and naming conventions and accounts for edge cases and errors. Challenges guidelines and proposed improvements. Leaves the code in a better state than before (boy scout rule). Understands when it is appropriate to leave comments, but biases towards self-documenting code.	Identifies the need and provides guidelines, conventions and style guide for the specific discipline if needed.
		5	2	0	0
	Testing	Knows the basic testing strategies like test pyramid. Writes unit tests, sometimes with help from more senior engineers.	Understands different testing strategies (e.g. test pyramid, test in production), writes unit tests in accordance with it, as well as higher level tests with help from more senior engineers. Always tests expected edge cases and errors as well as the happy path.	Understands the different testing strategies and when to apply which strategy ( for example when to rely on test in production, etc.), and writes unit tests as well as higher level tests in accordance with it. Always writes tests to handle expected edge cases and errors gracefully, as well as happy paths.	Understands the testing approach of a specific scope and uses quality metrics to identify gaps. Works with Teams to recommend solutions that are in accordance with testing frameworks used in the organisation and what is best fit for purpose. Influences domain wide testing strategy.
		5	1	1	1
	Debugging	Understands the basics of debugging and the tools used for it.	Uses a systematic approach to debug issues located within a single service. Is able to deal with incidents with the aid of runbooks.	Leads incident response for a Team as needed and is comfortable fixing production issues independently. Proficient at using systematic debugging to diagnose all issues located in the Teams' services. Uses systematic debugging to diagnose cross-service issues, sometimes with help from more senior engineers and engineers from other Teams. Shares knowledge through runbooks.	Leads complex incident response spanning multiple Teams within a Domain as needed. Is able to lead the communication to Senior Stakeholders during incidents. Proficient at using systematic debugging to diagnose all issues within a Domain or a specific scope. Supports the Domain in improving the handling of Incidents through better processes, tooling and observability.
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# SRP Competency Matrix

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	5	1	1	1	

# SRP Competency Matrix



	SE1	SE2	SE3	SE4
	Junior Software Engineer	Middle Software Engineer	Senior Software Engineer	Staff Engineer
Technical Skills	100%	25%		
Value	80%	10%		
Impact	85%	10%		
Leadership	70%			



What If?

Multiple stacks in company



# Team specific competency matrix



## Technical Skills

- C#
- .NET Core
- SQL
- Debugging Skills
- Performance Profiling
- Testing
- Bug Fixing

## Domain Knowledge

- Custom Framework structure
- Using Custom Framework as BL developer
- ERP Systems Knowledge

## Soft Skills

- English Communication
- Decision Making
- Continuous Improvement
- Mentoring

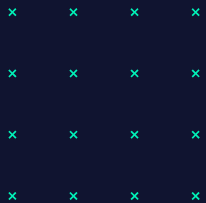


# How to use this?



## Organization

1. Hiring and Interviews
2. Performance Reviews & Promotions
3. Team Development Planning
4. Career Path Definition
5. Organizational Strategy





# How to use this?



## Team Lead

1. Individual Growth Planning
2. Team Skill Balance
3. Performance Management
4. Mentorship Program
5. Team Culture & Motivation



# How to use this?



## Engineer

1. Self-Assessment & Goal Setting
2. Career Path Planning
3. Skill Development Focus
4. Performance Discussions
5. Peer Learning & Collaboration



# Key Benefits



## Software Engineer

- Clear Career Direction
- Faster Professional Growth
- Better Job Satisfaction

## Team Lead

- Easier Team Management
- Improved Team Growth
- Better Team Engagement

## Organization

- Better Talent Management
- Improved Resource Planning
- Enhanced Business Value



# Challenge #2

## The Career Grade Mystery

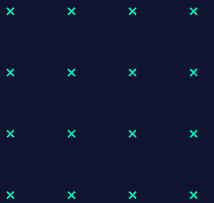


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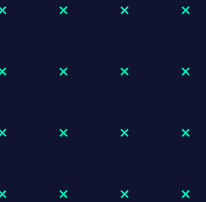


## Competency Matrix



# Challenge #1

## The Technology Stack Maze

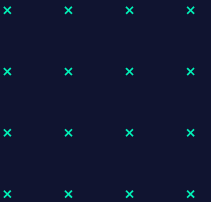


# Challenge #1

## The Technology Stack Maze



Public Competency Matrix  
of companies



# Key Benefits of public competency matrix



## Universities

- Curriculum Alignment
- Industry Partnership
- Educational Quality



## Students

- Career Planning
- Learning Efficiency
- Job Market Entry

## Organization

- Enhanced Employer Branding
- Improved Candidate Quality
- Industry Leadership





We will start this initiative

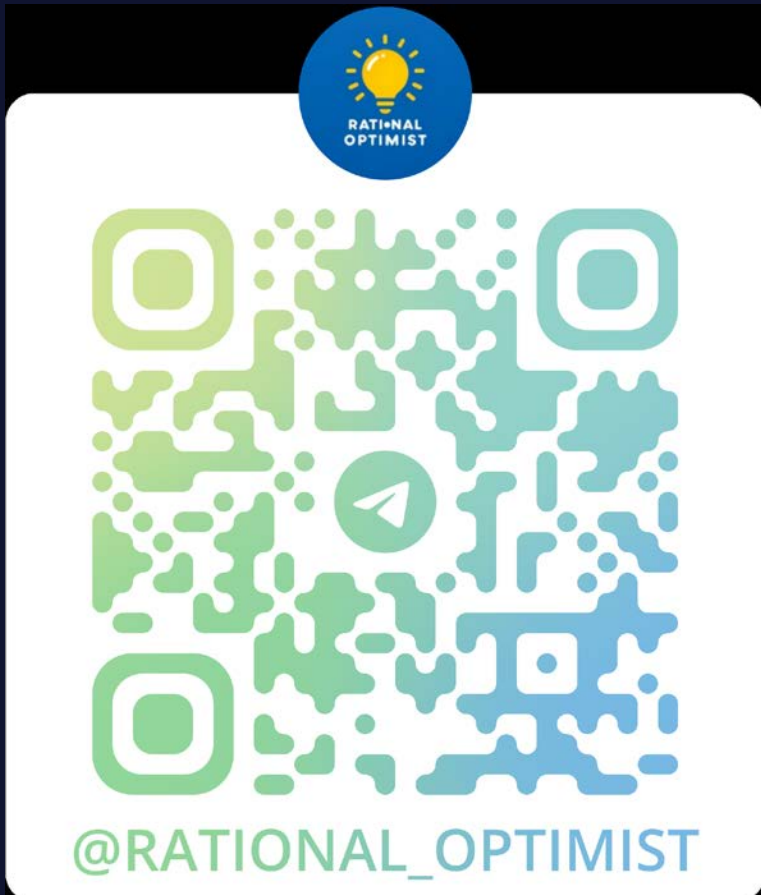
Silk Road  
Professionals  
Engineering  
Competency  
Matrix



[shorturl.at/T02TZ](https://shorturl.at/T02TZ)



○ That's all!



Muhammad  
Abdugafarov

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