



# Andrey Stoev

SOFTWARE ENGINEER · MATHEMATICIAN · STATISTICIAN

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## ABOUT ME

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Software Engineering graduate from the Faculty of Mathematics and Informatics at Sofia University with a strong interest in software design, backend systems, and automation. I enjoy solving complex problems, learning new technologies, and turning ideas into practical, maintainable solutions. I value clear communication, take ownership of my work, and thrive in collaborative teams focused on delivering high-quality software.



## EXPERIENCE

### Senior Application Engineer

May 2026 – Present

SAP

Architect cloud-native microservices and AI-powered automation orchestrating complex SAP ECC to S/4HANA Cloud transitions — deterministic data health assessment, intelligent error remediation, and proactive migration readiness. Drive strategic architectural decisions and mentor developers.

Cloud-Native (K8s)

Microservices

AI/Automation

LLM Integration

Java 21+/Spring Boot

Gradle

SAP ECC/S/4HANA

Apache Kafka

Redis

CI/CD

SAP Fiori

OpenUI5

TypeScript

### Java-Quant Developer

Apr 2023 – Apr 2026

Flutter International

Architect and develop robust Java game servers; create, refine and tune complex game logic and mathematical models to ensure precise RTP and volatility. Own the full development lifecycle from design through CI/CD deployment.

Java 17+

Maven

Game Mathematics

RTP/Volatility

Monte Carlo Algorithms

GitHub Actions

AWS

NoSQL/SQL

JUnit/TDD

Kubernetes

Linux

### Game-Math Designer

Mar 2022 – Mar 2023

Evolution Engineering

Developed engaging gameplay by balancing complex probabilities and mechanics; scripted automated tools, analyzed statistical data, and collaborated to implement high-quality game features within a robust Slot Framework using agile methodologies.

Probability Theory

Combinatorics

Python

Statistical Analysis

PHP

Unix



## EDUCATION

### B.Sc. Software Engineering

2018 – 2022

FMI, Sofia University

### M.Sc. Business Administration

2011 – 2012

UNWE, Sofia

### B.Sc. Business Administration

2007 – 2011

UNWE, Sofia

### Mathematics & Computer Science High School

2002 – 2007

Natural Sciences and Mathematics High School, Vratsa

## UNIVERSITY COURSES

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### PROGRAMMING

- ▶ Modern Java Technologies
- ▶ Data Structures and Algorithms
- ▶ Design and Analysis of Algorithms
- ▶ Object-Oriented Programming
- ▶ Intelligent Systems (Data Mining)
- ▶ Databases & Web Technologies
- ▶ Distributed Systems
- ▶ Web Application Development with Java
- ▶ Operating Systems

### MATHEMATICS

- ▶ Differential and Integral Calculus
- ▶ Statistics and Empirical Methods
- ▶ Complex Analysis & Linear Algebra
- ▶ Operations Research
- ▶ Differential Equations and Applications

### SOFTWARE ENGINEERING & ADVANCED

- ▶ Distributed Software Systems
- ▶ Computer Networks & QA
- ▶ Design and Integration of Software Systems
- ▶ Finite Automata Applications
- ▶ Fast Algorithms in Data Structures
- ▶ Advanced Combinatorics and Graph Theory
- ▶ Advanced Number Theory

## TECHNOLOGIES & SKILLS

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Algorithms & Data Structures	95%	Statistics & Empirical Methods	85%
Spring Framework & Java Ecosystem	90%	FastAPI & Python Ecosystem	70%
Apache Kafka & Kafka Connect	80%	Redis & Caching	75%
Docker & Kubernetes	80%	GitHub Actions / CI-CD	82%
DB Migrations (Liquibase & Flyway)	78%	AWS & Cloud Services	75%

### ALSO PROFICIENT IN

Hibernate ORM / JPA	Thymeleaf	Maven / Gradle	MySQL / PostgreSQL / MSSQL	SOAP/REST		
Microservices	Design Patterns	SOLID Principles	C / C++	Bash / Zsh	HTML / CSS / JS	
JUnit 5 / Mockito	Selenium	Scrum / Kanban	Jira / ClickUp	R / Matlab	NumPy / SciPy	JavaScript

### Advanced Tile Proportion-Preserving Reel Sets Generator

Red Tiger · 2022

- ▶ Engineered a flexible reel set generator preserving exact tile proportions across all reels with full configurability of shuffling logic, stack sizes, and payout-driven layout constraints.
- ▶ Implemented weighted stack selection with configurable probabilities for fine-tuned RTP and volatility control.
- ▶ Deterministic generation guaranteeing convergence to valid solutions for all major payout strategies.

Java

Maven

RNG

Probability Theory

Algorithms

### Advanced Bonus Purchase & Ante Bet Multiplier Systems

Cayetano Gaming · 2024

- ▶ Developed deterministic bonus acquisition with configurable payout filtering and manifest-driven progressive bonus tracking.
- ▶ Engineered bet multiplier systems increasing probability of triggering specific bonuses with precise RTP balancing.
- ▶ Both functionalities accompanied by simulation modules and detailed documentation.

Java

Spring Framework

REST APIs

Monte Carlo Algorithms

Data Structures

## Pathfinder — Interactive Route Sharing Platform

2022

Full-stack web app for outdoor enthusiasts to share, discover and review custom routes with interactive maps, photo uploads, role-based access control, and weather API integration.

Java 17

Spring Boot

MySQL

Liquibase

Docker

Spring Security 6

## MyMobile — Full-Stack Car Classifieds Platform

2021

Online marketplace for vehicles with advanced multi-parameter search, live currency converter (BGN/USD/EUR), email verification, OAuth2, Prometheus/Grafana monitoring, and i18n support.

Java 17

Spring Boot

Spring Security 6

OAUTH2

Prometheus

Micrometer

## House Price Prediction — Multivariable Linear Regression

2024

Boston Housing Dataset regression model with EDA, correlation heatmaps, and scatter plots using Python data science stack.

Python

Jupyter

scikit-learn

Pandas

Matplotlib

## Blackjack

2023

Full-stack Spring Boot casino Blackjack game with complete user management, Luhn-validated payment system, all standard rule variants, Spring Security + reCAPTCHA v2, and EN/BG i18n.

Java 17

Spring Boot 3

Spring Security

MySQL

Liquibase

Docker

## Stock News App

2023

Python automation tool monitoring stock price movements via Alpha Vantage, fetching top news from NewsAPI, and sending formatted Twilio SMS alerts on configurable price swings.

Python 3

Alpha Vantage API

NewsAPI

Twilio SMS

Requests

## Reactor — Avalanche Slot Machine Mechanics

2024

Spring Boot REST API simulating Relax Gaming-style avalanche (cascade) slot mechanics on an 8×8 grid with cluster-based pays, long-run RTP/volatility simulations, and interactive Swagger UI.

Java 17

Spring Boot

HATEOAS

OpenAPI/Swagger

Gradle

Apache Commons RNG

**+ GAMES**

**RED TIGER — CONFIGURATION & MATH DESIGN**

<b>GAME</b>	<b>STRATEGY</b>	<b>REELS / ROWS</b>	<b>VOL</b>	<b>HIT RATE</b>	<b>MSM</b>	<b>BB/AB</b>	<b>RELEASED</b>
Tricks and Treats	Paylines (LTR)	4-4-4-4-4	2 / 5	25.98%	1,697x	N/N	2022-10-20
Blobsters Clusterbuster™	Clusters Pay	9x9	3 / 5	34.76%	7,517x	N/N	2023-02-16
Transylvania: Night of Blood	Ways	4-4-4-4-4-4	4 / 5	27.76%	7,439x	N/N	2023-02-16
Red Hot BBQ	Paylines (LTR)	3-3-3-3-3	4 / 5	29.74%	1,110x	Y/N	2023-04-26
Magic Powers Megaways™	Megaways™	6x7	4 / 5	25.73%	25,440x	N/N	2023-04-27

**CAYETANO GAMING — IMPLEMENTATION & CONFIGURATION**

Moods of Hecate	Paylines (LTR)	3-3-3-3-3	3 / 5	17.24%	2,248x	N/N	2024
Joker Mega Wins	Paylines (LTR)	3-3-3-3-3	3 / 5	25.04%	5,000x	N/N	2024
Pharaoh's Eternal Glory	Paylines (LTR)	3-3-3-3-3	4 / 5	31.33%	4,500x	N/N	2025
Tumble Dwarf and the Library of Secrets	Paylines (LTR)	3-3-3-3-3	2 / 5	28.08%	1,500x	N/N	2025
Armando Rico and the Book of Dragons	Paylines (LTR)	3-3-3-3-3	4 / 5	30.30%	1,500x	N/N	2025
Paddy Power Gold: Knock Knock Knock!	Paylines (BW)	3-3-3-3-3	3 / 5	21.99%	1,300x	N/N	2025
Book of Sacrifice	Paylines (LTR)	3-3-3-3-3	3 / 5	26.00%	5,000x	N/N	2025
Robin Hood Loot'n Win	Paylines (LTR)	4-5-6-5-4	3 / 5	19.00%	4,500x	N/N	2025
Lion's Cave	Paylines (LTR)	3-3-3	3 / 5	23.50%	6,300x	N/N	2025
Tumble Dwarf: Enchanted Reels	Clusters Pay	7x7	5 / 5	32.44%	5,000x	Y/N	2025

**CAYETANO GAMING — DESIGN, IMPLEMENTATION & CONFIGURATION**

Classy Vegas Pots	Paylines (ADJ)	4-4-4-4-4	2 / 5	22.02%	1,500x	N/N	2024
FanDuel: Classic Invaders	Paylines (LTR)	5x3->5x5	4 / 5	20.77%	2,200x	Y/Y	-

VOL — Volatility Profile    LTR — Left to Right    RTL — Right to Left    BW — Both Ways    ADJ — Adjacent Tiles  
 MSM — Max Stake Multiplier    BB — Bonus Buy    AB — Ante Bet

 **ADDITIONAL**

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Published articles and problems in Bulgarian mathematics and informatics journals (*МАТЕМАТИКА+* — M+321, M+335, M+351, M+359, article "Around Paul Finsler and Hugo Hadwiger Inequality") and problem solutions in the world-wide popular science magazine *Квант* (Quantum).

 **LANGUAGES**

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**Bulgarian — Native**

**English — Professional**