



# Sven Njegač

SOFTWARE ENGINEER · PLATFORM ENGINEERING

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*"Be the change that you want to see in the world."*

## Experience

### Constructor.io

San Francisco, CA, United States

#### LEAD PLATFORM ENGINEER

Nov. 2023 - Present

- Everything that matters.
- Designed and provisioned the entire infrastructure on the AWS cloud to meet security compliance and acquire a business license for financial services in Korea.

#### DEVOPS ENGINEER

Jun. 2023 - Oct. 2023

- **Instagram Server Release** (Jan 2022 - Present)
  - designing and building release processes and infrastructure, to continuously rollout Instagram product code
  - collaborating and aligning with many different teams in Instagram - webserver, developer experience, products, ...
  - managing projects, timelines and expectations with stakeholders
- **Elasticsearch** (Jan 2020 - Jan 2022)
  - designing, building and maintaining all of Elasticsearch infrastructure at Meta
  - working with teams using Elasticsearch to understand their needs and onboard them
  - designed cluster architecture and integration with Meta systems; entire cluster lifecycle management
  - implemented a continuous integration and deployment solution for Elasticsearch clusters - CI/CD pipelines with custom monitoring and push strategies
- **Vulnerability Management** (Nov 2018 - Jan 2020)
  - building distributed systems architecture to discover and manage vulnerabilities in all of Meta infrastructure
  - helping build "Vulnerability Management-as-a-Service" - self serviced vulnerability discovery, monitoring and alerting
  - working with external partners (companies) on integrating multiple vulnerability providers into our system to broaden coverage and increase discovery speed
  - cross functional work with numerous other teams to help them surface vulnerabilities in their libraries/repositories/services/hosts and helping them remediate
  - one of the core maintainers of Meta's opensource tools and libraries for managing vulnerability data (nvdtools)
- **Misc**
  - interviewing candidates for jobs at Meta - coding and systems (Linux) interviews for engineers
  - primary point of contact ("bootcamp mentor") for Meta newcomers - assigning tasks, tracking progress, helping with team selection, introducing the Meta culture
  - helping new team members with onboarding - finding tasks and projects, explaining how the systems work, etc.
  - presenting on internal conferences at Meta
  - presented my life journey as an engineer to numerous Middle schools across the UK, as part of the Primary Engineer Programme

### Superbet

Zagreb, Croatia

#### SITE RELIABILITY ENGINEER

Mar. 2022 - Jun. 2023

- Distributed tracing setup, both infrastructure and application layers.
- Kafka connect deployment.
- Load testing Kubernetes clusters on AWS with k6.io.

#### LEAD SOFTWARE ENGINEER

Jan. 2021 - Feb. 2022

- Leading development and maintenance of 13 production services on a betting platform that has 350 000 unique visitors a month, 30 000 bets per hour and 30 000 Kafka messages per second
- Replaced legacy bet acceptance solution. Improved scalability from 80req/s to 6400req/s
- Conducting 1on1 meetings with 4 team members, supporting their technical growth
- Interviewing new candidates, engineering roles

#### SOFTWARE ENGINEER

Jun. 2019 - Dec. 2021

- Development of an event-driven sports betting system
- Bet acceptance, Payment, Offer and Risk integration
- Responsible for online solution delivery
- Introduced: In-house Redis library, Kubernetes health checks, gRPC load balancing
- Design documents, Code reviews, Unit and E2E testing
- System monitoring and service metric collection with Prometheus and Grafana

## Undergraduate Research, Machine Learning Lab(Prof. Seungjin Choi)

Pohang, S.Korea

RESEARCHER

Mar. 2016 - Exp. Jun. 2017

- Researched classification algorithms(SVM, CNN) to improve accuracy of human exercise recognition with wearable device.
- Developed two TIZEN applications to collect sample data set and to recognize user exercise on SAMSUNG Gear S.

## R.O.K Cyber Command, MND

Seoul, S.Korea

SOFTWARE ENGINEER & SECURITY RESEARCHER (COMPULSORY MILITARY SERVICE)

Aug. 2014 - Apr. 2016

- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.
- Implemented a distributed web stress test tool with high anonymity.
- Implemented a military cooperation system which is web based real time messenger in Scala on Lift.

## NEXON

Seoul, S.Korea & LA, U.S.A

GAME DEVELOPER INTERN AT GLOBAL INTERNSHIP PROGRAM

Jan. 2013 - Feb. 2013

- Developed in Cocos2d-x an action puzzle game(Dragon Buster) targeting U.S. market.
- Implemented API server which is communicating with game client and In-App Store, along with two other team members who wrote the game logic and designed game graphics.
- Won the 2nd prize in final evaluation.

## Undergraduate Research, Computer Vision Lab(Prof. Bohyung Han)

Pohang, S.Korea

RESEARCHER FOR <DETECTING VIDEO'S TORRENTS USING IMAGE SIMILARITY ALGORITHMS>

Sep. 2012 - Feb. 2013

- Researched means of retrieving a corresponding video based on image contents using image similarity algorithm.
- Implemented prototype that users can obtain torrent magnet links of corresponding video relevant to an image on web site.

## Software Maestro (funded by Korea Ministry of Knowledge and Economy)

Seoul, S.Korea

SOFTWARE ENGINEER TRAINEE

Jul. 2012 - Jun. 2013

- Performed research memory management strategies of OS and implemented in Python an interactive simulator for Linux kernel memory management.

## ShitOne Corp.

Seoul, S.Korea

SOFTWARE ENGINEER

Dec. 2011 - Feb. 2012

- Developed a proxy drive smartphone application which connects proxy driver and customer. Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.

## SAMSUNG Electronics

S.Korea

FREELANCE PENETRATION TESTER

Sep. 2013, Mar. 2011 - Oct. 2011

- Conducted penetration testing on SAMSUNG KNOX, which is solution for enterprise mobile security.
- Conducted penetration testing on SAMSUNG Smart TV.

## Education

### POSTECH(Pohang University of Science and Technology)

Pohang, S.Korea

B.S. IN COMPUTER SCIENCE AND ENGINEERING

Mar. 2010 - Aug. 2017

- Got a Chun Shin-Il Scholarship which is given to promising students in CSE Dept.

## Skills

**DevOps** AWS, Docker, Kubernetes, Rancher, Vagrant, Packer, Terraform, Jenkins, CircleCI

**Back-end** Koa, Express, Django, REST API

**Front-end** Hugo, Redux, React, HTML5, LESS, SASS

**Programming** Node.js, Python, JAVA, OCaml, LaTeX

**Languages** Korean, English, Japanese

## Extracurricular Activity

### B10S (B1t On the Security, Underground hacker team)

S.Korea

CORE MEMBER

Nov. 2011 - PRESENT

- Gained expertise in penetration testing areas, especially targeted on web application and software.
- Participated on a lot of hacking competition and won a good award.
- Held several hacking competitions non-profit, just for fun.

## WiseGuys (Hacking & Security research group)

S.Korea

MEMBER

Jun. 2012 - PRESENT

- Gained expertise in hardware hacking areas from penetration testing on several devices including wireless router, smartphone, CCTV and set-top box.
- Trained wannabe hacker about hacking technique from basic to advanced and ethics for white hackers by hosting annual Hacking Camp.

## PoApper (Developers' Network of POSTECH)

Pohang, S.Korea

CORE MEMBER & PRESIDENT AT 2013

Jun. 2010 - Jun. 2017

- Reformed the society focusing on software engineering and building network on and off campus.
- Proposed various marketing and network activities to raise awareness.

## PLUS (Laboratory for UNIX Security in POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2010 - Oct. 2011

- Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.
- Participated on several hacking competition and won a good award.
- Conducted periodic security checks on overall IT system as a member of POSTECH CERT.
- Conducted penetration testing commissioned by national agency and corporation.

## MSSA (Management Strategy Club of POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2013 - Jun. 2017

- Gained knowledge about several business field like Management, Strategy, Financial and marketing from group study.
- Gained expertise in business strategy areas and insight for various industry from weekly industry analysis session.

# Honors & Awards

## INTERNATIONAL AWARDS

2021	<b>2nd Place</b> , AWS ASEAN AI/ML GameDay	Online
2020	<b>Finalist</b> , DEFCON 28th CTF Hacking Competition World Final	Las Vegas, U.S.A
2018	<b>Finalist</b> , DEFCON 26th CTF Hacking Competition World Final	Las Vegas, U.S.A
2017	<b>Finalist</b> , DEFCON 25th CTF Hacking Competition World Final	Las Vegas, U.S.A
2014	<b>Finalist</b> , DEFCON 22nd CTF Hacking Competition World Final	Las Vegas, U.S.A
2013	<b>Finalist</b> , DEFCON 21st CTF Hacking Competition World Final	Las Vegas, U.S.A
2011	<b>Finalist</b> , DEFCON 19th CTF Hacking Competition World Final	Las Vegas, U.S.A
2012	<b>6th Place</b> , SECUINSIDE Hacking Competition World Final	Seoul, S.Korea

## DOMESTIC AWARDS

2021	<b>2nd Place</b> , AWS Korea GameDay	Seoul, S.Korea
2015	<b>3rd Place</b> , WITHCON Hacking Competition Final	Seoul, S.Korea
2017	<b>Silver Prize</b> , KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	<b>Silver Prize</b> , KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	<b>2nd Award</b> , HUST Hacking Festival	S.Korea
2010	<b>3rd Award</b> , HUST Hacking Festival	S.Korea
2012	<b>3rd Award</b> , Holyshield 3rd Hacking Festival	S.Korea
2011	<b>2nd Award</b> , Holyshield 3rd Hacking Festival	S.Korea
2011	<b>5th Place</b> , PADOCON Hacking Competition Final	Seoul, S.Korea

## COMMUNITY

2022	<b>AWS Community Builder (Container)</b> , Amazon Web Services (AWS)
2022	<b>HashiCorp Ambassador</b> , HashiCorp

# Certificates

- 2023 **AWS Certified Advanced Networking - Specialty**, Amazon Web Services (AWS)
- 2023 **AWS Certified Developer – Associate**, Amazon Web Services (AWS)
- 2023 **AWS Certified Cloud Practitioner**, Amazon Web Services (AWS)
- 2022 **AWS Certified Security - Specialty**, Amazon Web Services (AWS)
- 2022 **AWS Certified Solutions Architect – Professional**, Amazon Web Services (AWS)
- 2019 **AWS Certified Solutions Architect – Associate**, Amazon Web Services (AWS)
- 2021 **AWS Certified SysOps Administrator – Associate**, Amazon Web Services (AWS)
- 2020 **Certified Kubernetes Application Developer (CKAD)**, The Linux Foundation
- 2023 **HashiCorp Certified: Consul Associate (002)**, HashiCorp
- 2023 **HashiCorp Certified: Terraform Associate (003)**, HashiCorp
- 2020 **HashiCorp Certified: Terraform Associate (002)**, HashiCorp

## Presentation

### DevFest Seoul by Google Developer Group Korea

Seoul, S.Korea

PRESENTER FOR <HOSTING WEB APPLICATION FOR FREE UTILIZING GITHUB, NETLIFY AND CLOUDFLARE>

Nov. 2017

- Introduced the history of web technology and the JAM stack which is for the modern web application development.
- Introduced how to freely host the web application with high performance utilizing global CDN services.

### 6th CodeEngn (Reverse Engineering Conference)

Seoul, S.Korea

PRESENTER FOR <DEFCON 20TH : THE WAY TO GO TO LAS VEGAS>

Jul. 2012

- Introduced CTF(Capture the Flag) hacking competition and advanced techniques and strategy for CTF

### 6th Hacking Camp - S.Korea

S.Korea

PRESENTER FOR <METASPLOIT 101>

Sep. 2012

- Introduced basic procedure for penetration testing and how to use Metasploit

## Writing

### A Guide for Developers in Start-up

Facebook Page

FOUNDER & WRITER

Jan. 2015 - PRESENT

- Drafted daily news for developers in Korea about IT technologies, issues about start-up.

### AhnLab

S.Korea

UNDERGRADUATE STUDENT REPORTER

Oct. 2012 - Jul. 2013

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

## Program Committees

- 2016 **Problem Writer**, 2016 CODEGATE Hacking Competition World Final
- 2013 **Organizer & Co-director**, 1st POSTECH Hackathon
- 2012 **Staff**, 7th Hacking Camp
- 2012 **Problem Writer**, 1st Hoseo University Teenager Hacking Competition
- 2012 **Staff & Problem Writer**, JFF(Just for Fun) Hacking Competition

S.Korea

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