

# Dongsam Byun [변동삼]

Blockchain Engineer

Cosmos-SDK / Tendermint / Ethereum / Solidity / Smart Contract / Go, Python Backend

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## Experience

2018-

### B-Harvest, CTO

- Developing tendermint Liquidity Module of the Cosmos-SDK, which serves AMM(Automated Market Makers) on Cosmos Hub
- Contributing Cosmos-SDK, Tendermint open source and Customizing for analysis, validation
- Development and Consulting, Auditing of Blockchains Based on Cosmos-SDK and Tendermint (Kava, Terra, etc.)
- Building, managing and optimizing for Cosmos validator(DPoS) node system, Reliability Engineering
- Cosmos, Terra, IRIS, Kava, Chainlink, Secret Network, Band Protocol, etc Validator ( moniker: B-Harvest )
- Ranked Top Tier in Cosmos Game of Stakes (moniker: bharvest)
- Reporting critical security vulnerability ( Gaia, Cosmos-SDK, Cosmos-Hub )
- Designing Tokenized Fund using Smart Contracts

Cosmos-SDK  
Tendermint

Ethereum  
Solidity

AWS(EC2, VPC, DX)  
Golang

2018

### The Language Network(Atlas Labs), Lead Blockchain Engineer

- Developed Smart Contract, Dapp for publish ERC20 Token and ICO
- Implemented Blockchain Backend Server using Geth and web3.py
- Built Ethereum Blockchain Network as a sidechain and Ledger

Ethereum  
Geth  
Web3.py  
Web3.js

Solidity  
IPFS  
Truffle  
Python

Flask  
AWS  
Oraclize

2017-

### Self-employed, Freelancer Blockchain Engineer, Advisor, Lecturer, Author

- Advise for ICO and Blockchain Projects
- Blockchain Advisory Board Member, IIB Council 🐦
- Advisory Board Member for Blockchain Tech [sidechain, smart contract], Storichain 🐦
- Lecture on Ethereum and Solidity Programming Course, Fast campus 🐦
- Auditing Smart Contracts (Solidity)

2016-17

### WantedLab, Machine Learning, Software Engineer (Matching Cell)

- 원티드 (wanted.co.kr) Data Analysis, Machine Learning, Backend, REST API Development
- Implemented morphological analysis and extract keyword of Resume, Job Description text ( NLP, TF-IDF, Word2vec )
- Developed matching model and scoring system for between user and job ( Collaborative Filtering )
- Optimized feature for matching model using DNN, Tensorflow
- Developed auto Crawling system for company news with noise filtering

Python  
Flask  
AWS(EC2, ELB, RDS, CF, S3, Lambda)  
Redis

Jupyter  
gensim  
KoNLPy  
Numpy  
TensorFlow

scikit-learn  
Celery  
SQLAlchemy  
Mysql  
Elasticsearch

2016

### Cheoum, Lead Developer

CUfund Backend, Full Stack of P2P, P2B Crowd Funding Platform

- Developed whole web service of P2P Loan Platform
- Implemented Credit rating inquiry, identity verification, virtual account integration system
- Built infrastructure and DevOps using AWS

Python	AWS (EB, RDS, Lambda,	Slack
Django	SQS, CF, S3)	Trello
	Git	PostgreSQL

- 2015-16 **DAYLI Financial Group(Nomad Connection), Researcher(DataLabs)**
- Developed Log Collecting and analysis system for web page
  - Did research and analyze news text for stock investment ( Word2Vec, Doc2Vec )

Python	Spark	Git
Flask	Zeppelin	KoNLPy
AWS(EB, Lambda, SQS, S3)	Gensim	MongoDB
Javascript	Vagrant	RESTful

- 2014-15 **Self-employed, Freelancer**  
**Web, Data Crawler Development**

Facebook Page posts, comments	Google Image	Election candidate data
Amazon products, reviews	Naver News	ETC Apps, Shops ...
Instagram Posts, tags	Naver Finance	
	Daum Cafe Posts	

#### Automation

- Browser Automation for SEO [ Python, Selenium ]
- Business Automation for law firm [ Python, Flask ]
- Instagram Image Upload Automation [ Python ]
- Facebook Page Posting Automation [ Python, GraphAPI ]

## Education

- 2015-18 **Korea University, M.S. in Computer Science and Engineering**

Text mining for bigdata	Advanced information	Research in system
Bigdata planning and analysis	retrieval	security
	Social network security	Venture capital investments


















- 2011-15 **Dongguk University, B.S. in Computer Science and Engineering**  
Pizza Sales Prediction by Using Big Data Analysis / KIPS 2014 Fall Conference VOL 21 NO. 02  
PP. 0890 ~ 0893 (2014. 11)  
AI Lab (RA, TA)

## Contributions





cosmos/cosmos-sdk	ethereum/solidity	LanguageNetwork
tendermint/tendermint	ethereum/web3.py	solidity-korea
tendermint/liquidity	tensorflow/tensorflow	OpenMined
ethereum/pyethereum	bitcoin/bitcoin	omisego/plasma-mvp

## Projects

- 2020 **Liquidity: Tendermint AMM Liquidity Module of Cosmos-SDK**
- 2019 **Four-Pillars-Project: better validator operation of Tendermint/Cosmos-SDK**
- 2018 **DAIPO: Decentralized Autonomous Initial Public(Person) Offering**
- 2018 **BurrowCoin: Ethereum Deposit System with Token Economy**
- 2017 **Coin-Trends: Cryptocurrency Analysis Using Text Mining and Machine Learning**

	Quantitative Analysis, Text Mining, Open Source Analysis, Machine Learning Approach 
	Sentiment Analysis about Chatting data using doc2vec 
2015	<b>Logdig: Web/App Big Log Analysis Framework</b> 
	A framework that allows users to generate, collect, analyze, and visualize click, move, and exit logs generated by Web / App services
	Flask RESTful Server, Spark, Zepplien Dashboard
2014	<b>Sales forecast system through big data analysis</b>  
	Forecasts future sales volume by analyzing 10-year sales data on POS, online, and phone order share in the food service industry and external variables such as weather, news, weblog, and marketing information
	Data ETL using Python, Pandas and Machine Learning with Weka, Jython
2013	<b>System Trading by New Opinion Mining</b>  
	Signal generation through real-time news crawling and positive, negative opinion mining
	Project Manager, Python, XingAPI(Etrade)
2012	<b>Secure payment system based on QRcode scan</b>  
	Make payment by QRcode scan with sales information, By encrypting the user authentication and credit information required for payment and storing it on a personal smartphone rather than on a server
	Project Manager, Payment, Verification Server QRcode Manage Server, POS, Web/App Client
2012-14	<b>ETC</b>
	Ubiquitous smart home control system through voice recognition and web-based application  
	Lecture assistant software with hand motion motion sensor LeapMotion  
	Alarm and action execution system by proximity approach detection  
	Manufacture of embedded security equipment using Raspberry-Pie  

## Activities

2021	Reporting critical security vulnerability ( Gaia, Cosmos-SDK, Cosmos-Hub ) 
2020	Cosmos Community Contributor Grants 
2019	Cosmos Berlin Hackatom 2019, Honorable Mention, dDex: decentralized Delegation Exchange 
2018	Technical Mentoring, Judging for Blockathon ( Blockchain Hackathon ), Fastcampus 
2015	Korea University CCS Lab(Computer & Communication Security Laboratory) Full-Time
2014-16	public-private joint investigation team for cyber security, [ Korea Ministry of Science and ICT ]
2014	Dongguk University AI Lab TA, RA
2013-14	<b>Software Maestro</b> 4th Step 2, Top 50 [ Korea Ministry of Science and ICT, NIPA ]
2012-13	<b>BEST OF THE BEST</b> 1st Step3, Top 20 finalists, Cyber Security Elite Training program [ Korea Ministry of Science and ICT, Kitri ]
2011-12	Microsoft Student Partner 5th [ Microsoft Korea ]

## Presentations

2019	Database, Statistics, and Data Mining in dPoS Blockchain, Cosmos Seoul Hackatom 2019 
2018	Trends and View about Blockchain Development, Web World Contents Service Conference 2018 
2017	Consensus Algorithm of Ethereum and Mining Flow, Korea Ethereum Research Group, Google Campus Seoul 
2017	Ethereum A to Z, BlockChain Business Research Group 
2017	Machine Learning Engineer Meetup, WANTED x wework 
2015	Whitebox Testing, 2015 monsterz seminar, Hanyang Univ. 
2014	Sales Prediction System by Using Big Data Analysis, Hanium expo 2014, COEX 
2014	Drone-based tour and control systems with Cisco CMX technology, CISCO IoE Codefest, Songdo 
2013	Secure payment system based on QR code scan, COEX 

## Trainings

2014	Training and exploration at Silicon Valley, Google, MS, Stanford, HP etc.
2013-14	Software Maestro summer, winter education and training

## Prizes

- 2014 Computer Engineering General Design Project, Grand Prize [Dongguk Univ.]
- 2013 Software engineering project, Grand Prize [Dongguk Univ.]
- 2013 2nd TOPCIT competition, Special prize [Korea Ministry of Science and ICT, NIPA]
- 2013 APT attack simulation competition for enterprise security experts, 3rd place [Symantec]
- 2011 Technical report writing and presentation contest, Grand Prize[1st] [Dongguk Univ.]
- 2010 Open source software introduction essay contest, 2nd place [redhat Korea]




## Publications, Patents

- 2021 Proposal for Cosmos based Automated Market Maker, Liquidity Module
- 2014 Pizza Sales Prediction by Using Big Data Analysis / KIPS 2014 Fall Conference VOL 21 NO. 02 PP. 0890 ~ 0893 (2014. 11)
- 2014 AUTOMATIC SALES FORECASTING SYSTEM BASED ON DATA CRAWLING AND MANAGER'S INPUT (Publication, 1020140157122)
- 2013 SYSTEM AND A METHOD FOR TRADING STOCKS AUTOMATICALLY BASED ON OPINION MINING (Publication, 1020130142019)
- 2013 THE SECURITY ONLINE PAYMENT SYSTEM AND THOSE METHODS BASED ON TWO DIMENSIONS CODE SCANNING WITH A DEVICE CONTAINING ENCRYPTED PAYMENT AUTHENTICATION INFORMATION (Publication, 1020130001343)
- 2012 SECURITY PAYMENT SYSTEM BASED ON A CODE SCAN THROUGH A TERMINAL STORING ENCODED AUTHENTICATION INFORMATION AND A METHOD THEREOF FOR SAFELY PERFORMING AUTHENTICATION AND PAYMENT (Publication, 1020120062929)

## Certifications

- 2014 Engineer Information Processing (Human Resources Development Service Of Korea)
- 2010 LPIC (LPI)
- 2010 CCNA (CISCO)
- 2009 Certificate of Hacking Security Expert (National Association of Hacking & Security)

## Links

 dongsamb@gmail.com  
 Facebook  
 Github

 @dongsamb  
 LinkedIn  
 Youtube

 CV  
 Steem