

**Punghee Cho**

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## Skills Summary

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- **Languages** : TypeScript, JavaScript, React, Next.js, C#, .NET, Java, Spring, Node.js, NestJS, SQL
- **Cloud, Data & Blockchain** : Azure, AWS, Docker, GitHub Actions, Prisma, MongoDB, SQL Server, MySQL, Solidity, Hardhat, EVM RPC, EDI

## Experience

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**IHRC Inc** | Software Developer | Remote

Apr 2023 – Jun 2025

- **Contract for the Centers for Disease Control and Prevention (CDC)**
- **Modernization of the PulseNet project of CDC** | React, Typescript, C#, Azure, MongoDB  
Reduced dendrogram load time by 95%, from 3 minutes to 10 seconds for 2000+ entries by optimizing recursive algorithms and visualization logic.  
Built and enhanced React/TypeScript UI components, backend APIs, search functionality, and data visualization workflows for scientific data analysis.  
Improved reliability through Jest unit tests, backend API testing, bug fixes, and targeted local modifications to third-party visualization library behavior.

**ATNS GROUP** | Software Developer | Atlanta, GA

Jul 2022 – Feb 2023

- **EDI - AS2 Server Application** | Java, PowerShell, Docker, Mysql, H2, AS2  
Led a microservice development and deployment for managing MDN messages on an AS2 server.  
Developed inbound and outbound maps on confidential formats X12, EDIFACT.  
Supported partners (Tesla, Volvo, Volkswagen, Hyundai) in installing certificates and keys to set up AS2.

**Maevn Corporation** | Software Engineer Intern | Dallas, TX

Jan 2021 – May 2021

- **Integration between ERP and B2B systems** | Back-End | C#, NodeJS, MSSQL, .NET Core  
Developed REST APIs and rearchitected an ERP system based on the APIs to integrate with B2B systems.
- **Leading a system migration from an on-prem to AWS** | AWS  
Developed a scalable AWS serverless system using S3 and Lambda.  
Designed VPC, subnet, route table, and load balancer architecture with failover, auto-healing, and auto-scaling support.

**CONCOKOREA** | Software Developer | Seoul, South Korea

Apr 2018 – Jun 2019

- **CryptoCurrency Exchange Renewal** | Full Stack | Java, Spring Framework, AngularJS, Mysql  
Exchanged the code with AngularJS to create the exchange web page as a Single Page Application.
- **ICO - Initial Coin Offering** | Back-End | Public Blockchain, PowerShell Script, Linux  
Created the exchange's own cryptocurrency category and mined and distributed it to investors.
- **CryptoCurrency's Hardfork Tool** | Full Stack | Java, AngularJS, Shell Script, Mysql, Public Blockchain, Developed an API to display the amount of new cryptocurrencies created by hard forks.

## Projects

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[Crypto Pay – On-Chain Payment Gateway MVP](#)

Jan 2026 – Jul 2026

- Built and deployed a full-stack crypto payment gateway MVP with wallet login, invoice creation, Sepolia ETH payments, backend transaction verification, and a public read-only admin dashboard.
- Implemented Sign-In with Ethereum style authentication using nonce issuance, wallet signature verification, JWT sessions, protected admin actions, and WalletConnect/MetaMask support.
- Containerized frontend and backend services, published Docker images to GHCR, and deployed to Azure App Service through GitHub Actions CI/CD with smoke checks.
- Skills : Next.js, NestJS, Prisma, Solidity, Hardhat, Wagmi, Viem, Docker, Azure

[Shopping application with the BigData based recommender system](#)

Jul 2021 – Dec 2021

- Built a shopping app with collaborative-filtering recommendations by computing feature weights and [improving cosine similarity scoring](#).
- Skills : Spark, MongoDB, ReactJS, React-Native, NodeJS, ExpressJS, Heroku

[Creating Own Cryptocurrency, Blockchain Explorer, Wallet, Mining](#)

Jan 2019 – Jun 2019

- Created a Bitcoin-fork-based cryptocurrency with explorer database integration, wallet functionality, and automated Proof-of-Work mining setup.
- Skills : Linux(Ubuntu), BlockChain, Python, C++, Mysql

## Education

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**University of Texas at Dallas** | M.S. in Computer Science | Richardson, TX

Aug 2019 – May 2022

**Dankook University** | B.S. in Electrical Engineering | Seoul, South Korea

Mar 2011 – Feb 2018