

# Chee-Wee Chua's Portfolio of Projects

## Uniswap Hook Donations

A smart contract and a web browser interface that works underneath Uniswap, to allow donations to specific addresses.

Skills: TypeScript, Web3, Solidity, Node.js, DeFi

## Application Debugger / Monitor

Launches specified Windows application and monitors its debug messages, loading and unloading of libraries, thread starts and exits, exceptions, and breakpoints.

Skills: Win32 API, Debugger

## Blockchain transaction scanner

Scans and tracks transactions on Solana, Polkadot, Polygon, Ethereum on Node.js and encapsulated in a wallet application.

Skills: Node.js, TypeScript, Web3

## Open source Node.js library- DelphiRTL

A library of routines that provides common functionality, such as JSON RPC, logging, date routines for use on Node.js on [npm registry](#).

Skills: Node.js, TypeScript

## Open source Node.js library – web3-wallet-api

A library of routines that provides common Web3 wallets functionality for web browsers, available on [npm registry](#).

Skills: Node.js, TypeScript

## White Label Cryptocurrency Exchange

Fixed multi-threading issues on a white label cryptocurrency exchange.

Skills: C#, multi-threading, debugging.

## UpgradeLambda

Upgrades blockchain node software on AWS, remotely, by connecting using SSH.

Skills: AWS Lambda, Go

## Bitcoin Indexer

Indexes bitcoin transactions to allow it to be searchable.

Skills: TypeScript, Node.js, PostgreSQL

## Parnassus Debugger, Bookmark and Navigator

Fixed the Parnassus Debugger, Bookmark and Navigator so that it can integrate into RAD Studio.

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Skills: WinAPI, Pascal, multi-threading, debugging, troubleshooting

## Blue Cross Donations

The design and development of a donation system in Ethereum blockchain, including refunding of donations, with a real-time display update.

Skills: Solidity, Ethereum, TypeScript, CSS

## JSON RPC Framework

A JSON RPC Framework that allows easy dispatching of JSON RPC calls, with Aptos, Bitcoin, Ethereum, Polkadot and Solana clients.

Skills: JSON RPC, Object Pascal

Blockchains: Aptos, Bitcoin, Ethereum, Polkadot, Solana.

## WebSockets Framework

The first cross-platform Web Sockets Framework for Delphi, tested against Windows, and Linux for Firefox and Chrome.

Skills: WebSockets, Object Pascal

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## Terraform Filesystem Provider

A Terraform file system provider that manages directory and files.

Skills: Go(lang), plugin, filesystem

## StopMercuryAttacks

External plugins to the [Mercury SMTP/POP3](#) C++ mail server that prevents brute-force attacks, and adds IPv6 support to it.

StopMercuryAttacks is a Delphi project group consisting of 3 plugin projects:

1. Mercury.Daemons.StopSMTPAttacks
2. Mercury.Daemons.StopPOP3Attacks
3. Mercury.Daemons.MapIPv6

that protects both the Mercury SMTP and POP3 server from the following issues:

1. connections from the same IP within 70 seconds to the SMTP server
2. clients presenting EHLO/HELO with an IP address to the SMTP server
3. multiple AUTHs from the same connection within 5 seconds to the SMTP server
4. multiple failed logins to the POP3 server from the same host

It also provides the following functionality:

1. IPv6 mapping, so that connections via IPv6 are possible.

Skills: Win32 API, DLL integration, SMTP/POP3

## SGX Consulting

Worked with an international team (Australia, Singapore, UK, US), which gathered to troubleshoot and fix the Singapore Exchange (SGX) QUEST trading engine as it was running into issues and make recommendations on the way forward.

Skills: Delphi, trading engine, debugging, multi-threading