

# Joseph Widjaja

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## TECHNICAL SKILLS

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**Programming:** Java, C++, MatLab, Git, MySQL

**Web:** HTML, CSS, JavaScript, Bootstrap

**Other:** 3D CAD (Fusion 360, Solidworks), PCB layout and assembly.

## SOFTWARE PROJECTS

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### SimpleChat – Desktop chatting app

<https://github.com/jwidjaja0/SimpleChatServer>, <https://github.com/jwidjaja0/SimpleChatClient>

- Concepts applied: OOP, socket programming, multithreading, database management.
- Chatting application consisting of server and user applications. Server manages receiving new connections, user registration/logins, chatrooms, and message distributions to appropriate chatrooms and users.
- User can register/login, create new/join existing chatrooms, and communicate with other users.

### Multiplayer Tic-tac-toe

<https://github.com/jwidjaja0/GameServer>, <https://github.com/jwidjaja0/GameClient>

- Worked in team of 3 and developed a multiplayer Tic-tac-toe game, using the same architecture as the chatting application above. Players can connect to server and play Tic-tac-toe games with other players and view other games being played by other players.
- Server application manages user registration/logins, monitors all connected players and active games. Server can pull details of all players and previous games from database.
- Player application can view overall W/L/D and details of all games played in the past. Player can start new game with another player or play vs computer AI; computer AI was developed with minimax algorithm.
- Applied Agile software development with test-driven development, daily scrums, pair-programming, and user stories for continuous software delivery to client.

## PROFESSIONAL EXPERIENCE

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*Analytical Detection – Mission Viejo, CA*

### R&D Engineer

April 2018 – Present

- Support development of Ion Mobility Spectrometry (IMS) instrument for trace chemical detection.

*Rapiscan Systems – Torrance, CA*

### Analytical Chemist

Jan 2017 – Feb 2018

- Worked on improvements of existing handheld IMS systems for trace explosive and narcotics detection.

*Morpho Detection – Santa Ana, CA*

### Associate Research Scientist

June 2014 – Jan 2017

- R&D Mass Spectrometry and IMS instruments for improvements of trace explosive/narcotics detection.

## PATENTS

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- *Chemical Vaporization and Detection of Compounds Having Low Volatility*. US 9683981, 10317387
- *Temperature Influenced Chemical Vaporization and Detection of Compounds Having Low Volatility*. US 9689857, 10345282

## EDUCATION

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**Associate of Science, Computer Science** (in progress)

Saddleback College

**Bachelor of Science in Chemical Engineering**

University of California, Irvine. Honors: Cum Laude, GPA: 3.5