

Contact Information

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Personal Information

Citizenship: Slovenia (EU)

Work

[Freelance developer, data scientist and consultant, Slovenia](#)

- Android developer and biotech data scientist
- Tech and management consultant for growing businesses
- Management and self-actualization consultant for individual clients

Previously worked at:

[University of Natural Resources and Life Sciences Vienna](#), Austria
[Austrian Centre for Industrial Biotechnology](#), Vienna, Austria
[Lek Pharmaceuticals d.d. part of Sandoz](#), Novartis, Mengeš, Slovenia
[Swiss Federal Institute of Technology in Zurich \(ETHZ\)](#), Basel, Switzerland
[Jožef Stefan Institute](#), Ljubljana, Slovenia

Education

[University of Natural Resources and Life Sciences Vienna, Austria](#)

- DSc in Biotechnology, 2020

[University of Ljubljana, Faculty of Electrical Engineering, Slovenia](#)

- MSc in Biomedical Engineering, GPA 10.0/10, 2016

[University of Ljubljana, Faculty of Mathematics and Physics, Slovenia](#)

- BSc in Physics, GPA 9.5/10, 2012

Major Awards

Bronze medal at International Physics Olympiad, Vietnam, 2008

Languages

Slovene - Native proficiency

English - Full professional proficiency

German - Intermediate proficiency

Sport

Judo

- Registered competitor, 1997 - present
- Licensed instructor, 2009 - 2016, 2020 - present
- President of Judo club Križevci pri Ljutomeru, 2010 - present
- National judge, 2010 - 2015

Android

My apps:

- **Simple Text** - plain notes with Dropbox sync
<https://play.google.com/store/apps/details?id=simple.text.dropbox>
 - Highly customizable text editor
 - Custom two-way sync engine with cache for file structure with deep folder system
- **Playback Mic** - Microphone with Monitoring
<https://play.google.com/store/apps/details?id=eu.timetools.playbackmic>
 - Audio decoding and encoding (compressed and lossless formats)
 - Manipulating PCM audio data
- **Ab Player** - Audiobook Player
<https://play.google.com/store/apps/details?id=eu.timetools.ab.player>
 - Advanced bookmark capabilities (tracking a section, voice memo or text memo)
 - Taking bookmarks via 3rd party controllers such as Android Auto

Collaboration on larger apps:

- **Globalid** - portable, digital identity
<https://play.google.com/store/apps/details?id=net.globalid>
 - Part of messaging team, working on feature parity with other messaging apps, such as Signal, Telegram, WhatsApp, Messenger, Slack; as well integration of digital identity and digital wallet features

Various smaller and mid-sized apps for internal use by me or by clients.

Skillset:

- **All common patterns, principles and libraries**
 - MVVM, MVP
 - Coroutines, Flows, LiveData, RxJava, Room, Koin, Dagger, ExoPlayer, Retrofit, Picasso, Glide, OkHttp, AndroidX, JUnit4, Espresso, Android Auto, Timber, Billing, etc.
 - Lifecycle components, services, various MediaSession components, WorkManager, periodic jobs, audio devices, notifications, background tasks, etc.
 - Clean architecture, DRY, extension functions, covariance, modules, gradle...
 - *If I don't know something, I'm pretty quick to learn*

Tech Stack

Go-to stack:

- *Atlassian products* (Jira, Bitbucket, Confluence, Trello)
- *IntelliJ IDEs* (Android Studio, PyCharm, IDEA)
- *Databases* (MySQL, PostgreSQL, SQLite)
- *Python* (virtual environment, unittest, abstraction, periodic jobs, RESTful API, json, MySQL integration, web applications)
- *UI / UX tools* (*Inkscape*, *Figma*)
- *Misc* (Firebase, GitHub, Miro, Slack)

In-house testing server:

- Dell PowerEdge server
- Ubuntu OS
- Kubernetes, Docker, Jenkins CI
- AVD - virtual and real devices
- Nginx, ssh, socket, conjob, services, webhooks, iDRAC

Biotechnology

Areas of expertise:

- Continuous downstream processing
- Residence time distribution modeling
- Chromatography modeling
- Technical development of biomanufacturing processes
- Software development
- Data analysis

Programming languages:

- C, Python, Java, Kotlin, MySQL, R, Bash, Git

Programs and programming environments:

- Matlab, R Studio, Mathematica, Comsol Multiphysics, Unicorn, Empower

Publishing*Papers:*

Senčar J, Hammerschmidt N and Jungbauer A (2020) *Modeling the residence time distribution of integrated continuous bioprocesses*. Biotechnol J. doi: <https://doi.org/10.1002/biot.202000008>

Martins DL, **Senčar J**, Hammerschmidt N, Flicker A, Kindermann J, Kreil TR and Jungbauer A (2020) *Truly continuous low pH viral inactivation for biopharmaceutical process integration*. Biotechnology and Bioengineering, 117(5). <https://doi.org/10.1002/bit.27292>

Senčar J, Hammerschmidt N, Martins DL and Jungbauer A (2019) *A narrow residence time incubation reactor for continuous virus inactivation based on packed beds*. New Biotech. doi: [10.1016/j.nbt.2019.10.006](https://doi.org/10.1016/j.nbt.2019.10.006)

Martins DL, **Senčar J**, Hammerschmidt N, Tille, B, Kinderman, J, Kreil TR and Jungbauer A (2019) *A continuous solvent/detergent virus inactivation using a packed-bed reactor*. Biotechnol J. 2019; 14(8):e1800646; doi: [10.1002/biot.201800646](https://doi.org/10.1002/biot.201800646)

Gong W, **Senčar J**, Bakkum DJ, Jäckel D, Obien MEJ, Radivojevic M and Hierlemann AR (2016) *Multiple single-unit long-term tracking on organotypic hippocampal slices using high-density microelectrode arrays*. Front. Neurosci. 10:537; doi: [10.3389/fnins.2016.00537](https://doi.org/10.3389/fnins.2016.00537)

Japelj B, Ilc G, Marušič J, **Senčar J**, Kuzman D and Plavec J (2016) *Biosimilar structural comparability assessment by NMR: from small proteins to monoclonal antibodies*. Sci. Rep. 6, 32201; doi: [10.1038/srep32201](https://doi.org/10.1038/srep32201)

Patents:

Hammerschmidt N, **Senčar J**, Martins DL and Jungbauer A (2018) *Method for incubating liquids*. Publication no.: [20190022654](https://patents.google.com/patent/20190022654)

Open source library:

Author of **bio-rtd** library for modeling residence time distributions (RTD) of integrated continuous biomanufacturing (ICB) processes. Library is available under MIT license via package installer (pip) or at <https://github.com/open-biotech/bio-rtd>.

The library is mid-to-large size and it is developed in python with full code coverage and documentation.