

ENEA TSANAI

1338 Veterans Highway, Levittown, PA 19056

☎ (610) - 653 - 5287 ✉ enea.tsanai@gmail.com 🌐 enea-tsanai.github.io

TECHNICAL SKILLS SUMMARY

- **Programming Languages:** Node.js, JavaScript ES6, PHP, Python, Java, C++, Lisp
- **Server technologies & frameworks:** Nginx, Apache, Drupal, Flask, KeystoneJs, ExpressJs, Async
- **Client Libraries:** Angular, Ionic, Cordova, Webpack, Grunt, Bootstrap, jQuery, RxJs, Sass, Dygraphs
- **Databases:** MongoDB, MySQL, SQLite
- **Operating Systems:** Ubuntu, Mint, Windows, MacOS
- **APIs Integrations:** Stripe, Twilio, Microsoft Computer Vision, Socket.io, Facebook Graph, Google+, LinkedIn
- **Devops & Tools:** AWS, Jenkins, Docker, NPM, Bower, Maven, Git & GitHub, Sphinx, Draw.io, Jasmine, Karma, Protractor, JUnit, Webstorm, Postman, Xcode, Android Studio, JIRA

EXPERIENCE

Software Engineer, Xyntek Inc., Newtown, PA

Jan 2017 – Present

- Team lead and architect of the DailyGig ecosystem: A product composed of a scalable API server, an Android, iOS and web application.
- Rapid full stack hybrid applications test-driven developer in MEAN stack, Ionic and Cordova.
- Designed, developed and delivered core components such as in-app chat, call and payment transactions between users.
- Delivered rapid software evolution and high automation processes for CI/CD and software documentation by utilizing Package Managers, Babel, AWS, Jenkins, Docker, Sphinx and ApiDocs.
- Performed technical interviews, training and code reviews.
- Conducted OWASP security tests to minimize security vulnerabilities and ensured server PCI compliance.
- Thoroughly involved in project analysis, work breakdown and proposal documents.
- Main author of technical documents related to software architecture, deployment, bundling and APIs.
- Agile scrum master and communicator with project stakeholders to elicit requirements, report progress and plan milestones.

Systems Solutions Engineer Intern, Xyntek Inc., Newtown, PA

Jun 2016 – Dec 2016

- Refactored the DailyGig architecture blueprint and improved iterative software processes by utilizing scrum.
- Implemented core backend APIs related to authentication and user CRUD operations with ExpressJs and PassportJs.
- Identified, designed and implemented core database entities in MongoDB by utilizing Mongoose.
- Injected core middleware operations to improve API control and security.
- Delivered hybrid reusable frontend components such as form inputs, validation, submission and resource loading mechanisms by using Angular, Ionic, HTML5, Bootstrap and Sass.
- Significantly enhanced code coverage with Mocha, Chai and Protractor.

Full Stack Web Developer, CSC Department - Villanova University, Villanova, PA

Aug 2015- Dec 2016

- Designed, developed, documented and delivered a data visualization and aggregation web application as part of the NSF-Villanova Stormwater Systems Research Project. [↗](#)
- Integrated with Opti APIs to collect daily sensor generated data and perform data aggregation operations.
- Designed and developed a performance oriented data visualization module using Dygraphs and custom data pre-processing to render millions of data points in common browsers.
- Designed a micro-service to perform data analysis and trigger valve operations for water level control.
- Technologies: Node.js, KeystoneJs, Python-Flask, HTML5, Bootstrap, Sass, JQuery, Dygraphs and MongoDB.

Researcher & Developer, Research Unit 6, Patras, Greece

Jan 2012 - July 2015

- Focus on ad hoc networks, quality of service, multimedia streaming and routing protocols in mobile and vehicle ad hoc networks. Proposed cross layer mechanisms for routing, video streaming and interface-channel switching.
- Executed large scale simulations to evaluate the performance of known routing protocols in mobile and vehicle ad hoc networks. Published results in well-known international conferences including IEEE and Springer.

- Drupal developer, designer, administrator and maintainer of Ru6. [∞](#)
- Implemented routing enhancement mechanisms in C++, Python and the simulators NS-2 and NS-3.
- Automatized simulation execution, data aggregation and visualization with Bash, AWK, Matlab and Gnuplot.

Open Source Tutor & Contributor, Greek Open Source Software Society, Greece *Nov 2014 – July 2015*

- Led teams on open source contributions and delivered the translated NS-3 manual in the Greek language. [∞](#)
- Provided interactive training sessions in C++ scripting and advanced components of the NS-2 & NS-3 simulators. [∞](#)

Web Group Member & Drupal Developer, CEID Department, Patras, Greece *Oct 2014 - June 2015*

- Involved in site maintenance and development of Drupal custom modules. [∞](#)
- Documented the department's website architecture and maintenance procedures.

On Campus Intern: Product Feedback & Marketing, GameOn, Patras, Greece *Oct 2014 - Feb 2015*

- Campus lead: organized student marketing teams and collected heuristics for the GameOn application. [∞](#)
- Coordinated with stakeholders and reported user feedback back to headquarters in San Francisco.

EDUCATION

Villanova University, Villanova, PA *Aug 2015 – Dec 2016*

M.S. Software Engineering - GPA: 3.87

- Teaching & Research Assistant - Tuition Scholar
- Projects: AllJumbledUp (JavaFx, MongoDB), ProtegeRC (JavaFx, OWL) [∞](#)
- Courses: Software & Requirements Engineering, Database Systems, Artificial Intelligence, Design & Analysis of Algorithms, Cyber Security, Software Design & Evolution, Project Management.

University of Patras, Patras, Greece *Oct 2009 - Nov 2014*

B.S. Computer Engineering and Informatics

- Thesis: Routing and Multimedia Applications in Wireless Mobile and Vehicular Ad Hoc Networks [∞](#)
- Projects: Web Ordering System (PHP, MySQL, HTML, CSS, JQuery, Jtable), MyPlaces(Java, Android, XML). [∞](#)
- Courses Summary: Computer Architecture, Computational Complexity, Computer Networks, Data Structures, Digital Communications, Digital Signal Processing, Discrete Mathematics, Distributed Systems, Linear Algebra, Microprocessors, Operating Systems, Cryptography, Logic Design, Object Oriented Programming.

INTERNATIONAL PUBLICATIONS

- C. Bouras, Kapoulas, V., and Tsanai, E., “**Performance Evaluation of Routing Mechanisms for VANETs in Urban Areas**”, in *Algorithms, Probability, Networks, & Games. Springer International Publishing, 2015. 133-153.* [∞](#)
- C. Bouras, Kapoulas, V., and Tsanai, E., “**A GPSR Enhancement Mechanism for Routing in VANETs**”, in *The 13th International Conference on Wired & Wireless Internet Communications (WWIC' 2015), Malaga, Spain, 2015.* [∞](#)
- C. Bouras, Gkamas, A., Kapoulas, V., Politaki, D., and Tsanai, E., “**Enhancing video transmission in MANETs utilizing multiple interfaces and multiple channels per node**”, in *5th International Conference on Ad Hoc Networks, Barcelona, Spain, 2013.* [∞](#)
- C. Bouras, Kioumourtzis, G., Gkamas, A., Kapoulas, V., Politaki, D., and Tsanai, E., “**Evaluation of video transmission in emergency response ad - hoc networks**”, in *4th International Conference on Data Communication Networking - DCNET 2013, Reykjavik, Iceland, 2013, pp. 27-35.* [∞](#)
- C. Bouras, Gkamas, A., Kapoulas, V., Politaki, D., and Tsanai, E., “**Evaluation of Routing Protocols for Video Transmission over MANETs that use Multiple Interfaces and Multiple Channels per node**”, in *19th IEEE International Conference on Networks (ICON 2013), Singapore, 2013.* [∞](#)

LANGUAGES

- English (fluent), Greek and Albanian (native speaker)