

# Varvara (Valia) Kalokyri

Piscataway, New Jersey 08854 | (732) 766-4801 | [vkalokyri@gmail.com](mailto:vkalokyri@gmail.com)

LinkedIn: <https://www.linkedin.com/vkalokyri> | GitHub: <https://github.com/vkalokyri>

## EDUCATION

**PhD in Computer Science | GPA: 4.0/4.0**

May. 2021

Rutgers University, New Brunswick, NJ, USA

**Diploma (M.Eng.) in Electronic and Computer Engineering | GPA: 8.37/10.0** (10% of class)

Dec. 2011

Technical University of Crete, Chania, Greece

## PROFESSIONAL EXPERIENCE

**Research Data Engineer, Rutgers University, Piscataway, NJ**

Sep. 2014 – Now

- Designed a novel and intuitive multidimensional conceptual model that integrates personal data from various popular services (Personal Knowledge Base).
- Developed an algorithm and a scoring/ranking technique for grouping personal data into conceptually coherent episodes for common everyday tasks, by means of prototypical plans (AI scripts).
- Developed an Android application called "YourDigitalSelf" which provides users with narrative views of their digital memories and helps them reminiscing their past actions.
- Developed a fun web-based game similar to Family Feud for learning script knowledge and their digital by-products.
- Experienced in writing IRBs and conducting user studies (both in person and on AmazonTurk).

Tools/Technologies: *Java, Python, Django framework, Android Studio, MongoDB, SQLite, ORMLite, Git, xml, nltk library, gensim library, Stanford Entity Resolution Framework (SERF), BPMN, Amazon Turk, OAuth, RestFull APIs.*

**Teaching Assistant, Rutgers University, Piscataway, NJ**

Sep. 2013 - Now

- *336: Principles of Information and Data Management (11 semesters)*
  - Instruct ~200 students on how to design and implement a web application using the following technologies: HTML, JSPs, JDBC, MySQL, AWS RDS, AWS EC2.
  - Tutor students topics such conceptual modeling (ER), relational schema, SQL, functional dependencies, normal forms, transactions, tf-idf, noSQL (mongoDB).
- *437/539: Database Systems Implementation (2 semesters)*
  - Tutored ~80 students topics about: indexing, external sorting, query optimization, transactions, db security, map-reduce. (Hadoop, AWS S3).
- *541: Database Systems (1 semester)*
  - Tutored ~30 students on how to design and implement a web app for presenting, and analyzing music data by Gramusik.

**Software Engineer, Technical University of Crete, Chania, Greece**

Jan. 2010 - Aug. 2013

- Developed a multilingual web-based content management system for six European natural history museums (Greece, Portugal, Hungary, Germany, Estonia, Finland).
- Facilitated the authoring and metadata enrichment of cultural heritage objects and their semantic linkage with controlled vocabularies.
- Established interoperability between museums and the Europeana.eu portal.
- Experienced in writing Project Deliverables.

Tools/Technologies: *Google Web Toolkit (GWT), RDF(S), SKOS, OWL, XML, Apache Solr, Subversion, Protege, Jena, eXist DB.*

**Summer Intern, Hellenic Telecommunications Organization, Heraklion, Greece**

Jun. 2009 - Aug. 2009

- Resolved Internet connection problems (ADSL) for customers of the Hellenic Telecommunications Organization (OTE) via telephone and dealing with damages in the network.

## AWARDS & DISTINCTIONS

**Best graduate poster, 2<sup>nd</sup> & 3<sup>rd</sup> Annual Rutgers CS Conference** (among 50+ posters)

2019, 2020

**Computer Science Fellowship Award, Rutgers University**

Sep. 2019

**US National Science Foundation (NSF) Student Travel Award**, for attending CIKM International Conference

Oct. 2018

**TA/GA Development Fund Award, Rutgers University**

2017-2018

**Gerondelis Graduate Student Fellowship Award, Gerondelis Foundation**

Mar. 2015

**Best student paper nomination, 17th International Conference on Theory and Practice of Digital Libraries (TPDL)**

Sep. 2013

**Best student paper award, 7th Metadata and Semantics Research Conference (MTSR)**

Nov. 2013

**Undergraduate Performance Fellowship Award** for four consecutive years, Office of Sponsored Research, Technical University of Crete, awarded to the top 10% of the class.

2006-2009

## TECHNICAL SKILLS

**Programming/Scripting languages and tools:** Java, Python, Matlab, C, Eclipse IDE, Netbeans IDE, Apache Solr, Apache Tomcat, Subversion, GIT, JDBC, Hadoop, Android Studio, NLTK library, Latex, *Git*, AWS RDS, AWS EC2, AWS S3.

**Web Application Development Technologies:** HTML, CSS, Javascript, Java Servlets, JSPs, DAO, *ORMLite*, AJAX, Django framework, RESTfull services, Oauth, Amazon AWS, XML, XMLBeans, XPATH, XSL, XQUERY, Google Web Toolkit (GWT).  
**Semantic Web Technologies and tools:** RDF(S), SKOS, OWL, SPARQL, Protégé, Stanford Entity Resolution Framework (SERF).  
**NLP tools:** nltk library, gensim library, natty parser.  
**Databases:** MySQL, SQLite, MongoDB, eXist DB.

## TECHNICAL PROJECTS IN COURSES

**RU Search engine**, Cloud Computing, Rutgers University. (Grade:A)

- Implementation of an inverted index in a scalable manner by using Hadoop
- **Tools:** *Hadoop, MapReduce, Java, Eclipse IDE.*

**BeatMyRun**, Software Engineering, Rutgers University. (Grade:A)

- Requirements Analysis, Conceptual, Logical and Physical Database Design for BeatMyRun: an android mobile application that synchronizes music according to the user's pace while exercising.
- **Tools:** *Android studio, SQLite.*

**StockPredictor**, Software Engineering of Web Applications, Rutgers University. (Grade:A)

- Developed a short and long term stock prediction web application by using Kalman Filter (short-term) and SVM (long-term).
- **Tools:** *HTML, CSS, Javascript, AJAX, Java, Java Servlets, Java Server Pages (JSPs), DAO (Data Access Objects), MVC pattern, JDBC library, MySQL, Apache Tomcat, Netbeans IDE.*

**Face Recognition**, Statistical Modeling and Pattern Recognition, Technical University of Crete. (Grade:8/10)

- Development of a face recognition system by using supervised learning (bayesian classifier, NNR classifier) and classifying faces into male/female, smiling/serious, child/teen/adult/senior, glasses/none, hat/none, moustache/none, beard/none.
- **Tools:** *Matlab.*

**OAI-PMH web service**, Design, Development and Management of Web Services, Technical University of Crete. (Grade:10/10)

- Modeling and Development of an Open Archival Information System (XML Database, API, Client Application) and development of a SOAP Based Web Service that implements the OAI-PMH Protocol.
- **Tools:** *XML, XSL, XQUERY, XPATH, SOAP, WSDL, UDDI, RESTfull services, BPEL.*

## PUBLICATIONS

Kalokyri V., Borgida A., Marian A., Supporting Human Memory by Reconstructing Personal Episodic Narratives from Digital Traces, (under submission), [preprint](#)

Borgida A., Kalokyri V., Marian A., Knowledge Representation and Reasoning Aspects of Structured BPMN, in *Proceedings of the 17th Int. Conference on Business Process Management (BPM 2019)*

Vianna D., Kalokyri V., Borgida A., Marian A., Nguyen T., Searching Heterogeneous Personal Digital Traces, in *Proceedings of the Association for Information Science and Technology (ASIS&T 2019)*

Kalokyri V., Borgida A., Marian A., YourDigitalSelf: A Personal Digital Trace Integration Tool, in *Proceedings of the ACM International Conference on Information and Knowledge Management (CIKM 2018)*

Kalokyri V., Borgida A., Marian A., Vianna D., Semantic Modeling and Inference with Episodic Organization for Managing Personal Digital Traces, in *Proceedings of the 16th Internat. Conference on Ontologies, Databases, and Applications of Semantics (ODBASE'17)*

Kalokyri V., Borgida A., Marian A., Vianna D., Integration and Exploration of Connected Personal Digital Traces, in *Proceedings of the [ExploreDB @ SIGMOD/PODS, ACM, 2017.](#)*

Kalokyri V., Shome R., Yochelson I., Bekris K. E., A Single-Switch Scanning Interface for Robot Control by Quadriplegics, in *IEEE/RSJ International Conference on Intelligent Robots and Systems Workshop on Assistive Robotics for Individuals with Disabilities: HRI Issues and Beyond. (IROS 2014).*

Skevakis G., Makris K., Kalokyri V., Arapi P., Christodoulakis S., Metadata management, interoperability and Linked Data publishing support for Natural History Museums, in *International Journal on Digital Libraries (IJDL 2014).*

Makris K., Skevakis G., Kalokyri V., Arapi P., Christodoulakis S., Metadata management and interoperability support for natural history museums, in *Proceedings of the 17th International Conference on Theory and Practice of Digital Libraries (TPDL 2013).*

Makris K., Skevakis G., Kalokyri V., Arapi P., Christodoulakis S., Stoitsis J., Manolis N., Rojas S. L., Federating Natural History Museums in Natural Europe, in *Proceedings of the Metadata Semantics and Research Conference (MTSR 2013).*

Makris K., Skevakis G., Kalokyri V., Gioldasis N., Kazasis F. G., Christodoulakis S., Bringing environmental culture content into the Europeana.eu portal: The Natural Europe Digital Libraries Federation infrastructure, in *Proceedings of the 5th Metadata and Semantic Research Conference (MTSR 2011).*

## PERSONAL INTERESTS - EXTRA CURRICULAR ACTIVITIES

Salsa and Bachata performer, South Street Salsa Company Team, NJ, USA

2019 - Now

Salsa Team Captain, Rutgers University, NJ, USA

2016 - 2017

Ballroom dancer, Bronze and Silver medal from the UK Alliance of Professional Teachers of Dancing, Greece

2011 -2013

## LANGUAGES

Greek (Mother tongue)

English (fluent)