

# Vittis Vasileios

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## 1. EDUCATION

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**University of Massachusetts Amherst** Sept 2022 – Sept 2028  
*PhD - Computer Science* *Amherst, USA*  
– **Research Topic:** Incremental Maintenance of packages under Data and Query Drifts,  
Machine Learning techniques over Intensive Query Plans (PackageBuilder)

**Technical University of Crete** Sept 2015 - October 2021  
*Integrated Master Degree - School of Electrical and Computer Engineering* *Chania, Greece*  
Class Rank : 5.8%  
GPA : 3.4/4  
GPA (Computer Science) : 3.6/4

**Fifth year:**  
GPA: 3.7/4

- **Thesis:** *"Online Ensemble Classification Algorithms for Big Data Streams at Apache Flink"*  
Distributed Computation, Machine Learning, Scalable Computation, Data Stream Processing, Concept Drift Adaptation, Big Data
- **Research Project:** *"Distributed Random Forest at Apache Flink"*  
Hoeffding Trees, Online Bagging, Boosting, Adaptive Random Forest, Weighted Voting, Big Data

**A Level CS Courses:**

Special Topics in Database Systems\* (10/10), Approximation Techniques for Massive Databases and Data Streams\* (8.5/10), Artificial Intelligence (9/10), Multi-Agent Systems (8.5/10), Databases (9.5/10), Services in Computational Cloud and Fog (9.5/10), Digital Signal Processing (10/10) (\*graduate courses)

## 2. RESEARCH ACADEMIC EXPERIENCE

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- **Research Assistant** Sept, 2022 – Jun 2023  
*University of Massachusetts Amherst* *Amherst, USA*  
Incremental maintenance of packages over data and query drifts.
- **External Researcher** November, 2021 – May, 2022  
*Technical University of Crete* *Chania, Greece*  
Research on online Ensemble Learning optimization techniques & the effect of Diversity to Ensemble Systems.

## 3. RESEARCH SKILLS

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- **Programming Languages:** Python, Java, Scala, C++, Matlab, SQL, NoSQL, Solidity
- **Environments & Tools:** Apache Flink, Apache Spark, TensorFlow, Keras, Pandas, MapReduce (Hadoop), Server-Client Architecture, Cloud/Fog Computing, TPC-H November 2022

#### 4. RELEVANT PROJECTS

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- Web Application Development using Docker**  
Design and implementation of independent services using Docker containers. Server-side implementation, asynchronous programming, https redirects, session variables. Development of user and cloud interface. **(Ranked 2nd best)**

Sept 2019 - Dec 2019
- Evaluation of Machine Learning Algorithms for NPSLE classification**  
Robustness validation of ML classification algorithms: SVM, k-NN, Naïve Bayes, Random Forest. Exploration of feature reduction/selection methods: PCA, LDA and Pearson's correlation. **(Ranked 3rd best)**

Feb 2018 - Jun 2018
- TinyOS-3 extensions**  
Implementation of functional extensions of an operating system based on a virtual machine. Implementation of Multilevel Feedback Queue, Multilevel Thread Execution, Pipes and Sockets.

Sept 2018 - Dec 2018
- Database Management Project**  
Data management, data recovery, trigger deployment, implementation of Views using PostgreSQL functions. Query performance monitoring and updated view under JDBC protocol.

Feb 2017 - Jun 2017

#### 5. WORK EXPERIENCE

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- Blockchain Developer**  
*Ethereum Blockchain*  
Joined a group, building a base layer protocol for global, generic attestations.

Sept 2021 - Jan 2022
- Web Search Evaluator**  
*Appen Co.*  
Ensuring the accuracy, quality and relevance from research engine queries results.

April 2018 - Sept 2018

#### 6. HONOURS & AWARDS

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| <b>UMass CICS Scholarship for Best PhD Application (4,000\$)</b><br><i>University of Massachusetts Amherst</i>                               | 2022 |
| <b>1st Place Entrepreneurship Initiative Start-up Pitch Greek Section</b><br><i>Institute of Electrical and Electronics Engineers (IEEE)</i> | 2020 |

#### 7. VOLUNTEER ACTIVITIES

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| <b>Chairman</b><br><i>IEEE TUC Student Branch</i>  | May 2019 - May 2020 |
| <b>Workshop Instruction of "Mathematical Shapes with Python"</b><br><i>TUC WelcomeDay for freshmen</i> | Sept 2019           |
| <b>Webmaster</b><br><i>TUC Student Branch</i>  | May 2019 - May 2020 |
| <b>IEEEExtreme 2018 Ambassador</b><br><i>TUC Student Branch</i>  | Oct 2018            |