

Name: Avi Zakai

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## CURRICULUM VITAE

### 1. Higher Education

#### A. Undergraduate and Graduate Studies

Period of Study	Name of Institution	Faculty / Department	Degree	Year of Approval of Degree
2016-2018	Technion	Faculty of Education in Science and Technology Faculty, department of Mathematical Education	Associate degree, teaching certificate	2018
2006-2008	University of Haifa	Department of Statistics	M.A. (Mathematical Statistics/Biostatistics)	2008
2005-2006	University of Haifa	Department of Statistics	Completion to B.A level	2006
2001-2004	Yezreel Valley College	Department of Computer Science	B.A. (with honors)	2004

## 2. Academic Ranks and Tenure in Institutes of Higher Education

<b>Dates</b>	<b>Name of Institution and Department</b>	<b>Rank/Position</b>
2020 – Present	Yezreel Valley College, department of Information systems	Faculty Member
2018-2020	Technion, External studies division, Data Science	Lecturer
2018-2020	Gordon College of Education, preparatory studies unit	Lecturer
2017-2020	Yezreel Valley College, departments of Economics and Information systems	Lecturer
2011-2017	Yezreel Valley College, departments of Economics and Information systems	Teaching assistant

## 3. Invited Lectures\ Colloquium Talks

<b>Year</b>	<b>Place of Lecture</b>	<b>Name of Forum</b>	<b>Presentation/Comments</b>
2021	Yezreel Valley College	Academic staff Workshop	Linear Mixed Models
2019	Yezreel Valley College	Academic staff Workshop	Alternatives to Linear Regression in Big Data Environment Using R
2019	Yezreel Valley College	Academic staff Workshop	Generalized Linear Models: Logistic, Ordinal, and Multinomial Regression with SPSS
2018	Yezreel Valley College	Seminar for the Information systems department staff	Multiple Comparisons

Year	Place of Lecture	Name of Forum	Presentation/Comments
2018	Yezreel Valley College	Academic staff Workshop	Introduction to R Programming
2016	Technostat	Workshop for Statisticians	Generalized Linear Mixed Models Using SAS Proc GLIMMIX
2015	AMIT Institute at the Technion	Senior staff workshop	Introduction to Bayesian Statistics
2014	AMIT Institute at the Technion	Senior staff workshop	Statistical Quality Control: Shewhart control charts
2014	AMIT Institute at the Technion	Senior staff workshop	Sample Size Calculations for Clinical Trials
2013	AMIT Institute at the Technion	Senior staff workshop	Data Mining: Overfitting and the Curse of Dimensionality

#### 4. Teaching

##### a. Courses Taught in Recent Years

Year	Name of Course	Institution
2021	Design and Implementation of Projects	Yezreel Valley College
2021	Advanced Methods in Economic Data Analysis	Yezreel Valley College
2020-2021	Computational Learning	Yezreel Valley College
2020-2021	Data Structures and Algorithms 1	Yezreel Valley College
2020-2021	Basics of Programming for Analysts with Python	Yezreel Valley College
2019-2021	Data Mining Lab with R	Yezreel Valley College
2018-2021	Econometrics	Yezreel Valley College
2018-2020	Statistical Learning with R for Data Scientists	Technion
2018-2020	Statistics and Probability with R for Data Scientists	Technion
2018-2020	R Programming	Technion
2018-2020	Mathematics for School Teachers	Gordon College
2018-2020	Quantitative Research Methods	Gordon College

Year	Name of Course	Institution
2018-2020	Mathematical Support	Yezreel Valley College
2019	Advanced Data Analysis Workshop	Yezreel Valley College
2015-2021	Discrete Mathematics 2 (Mathematical Logic, Graph Theory)	Yezreel Valley College
2015-2020	Discrete Mathematics 1 (Set Theory)	Yezreel Valley College
2017-2019	Operational Research	Western Galilee College
2017	Programming Support Lab (Logo)	Yezreel Valley College
2017	Introduction to Computer Science	Yezreel Valley College
2011-2021	Introduction to Statistics	Yezreel Valley College
2011-2021	Linear Algebra	Yezreel Valley College
2011-2020	Calculus 1	Yezreel Valley College
2011-2021	Calculus 2	Yezreel Valley College
2011-2018	Introduction to Probability	Yezreel Valley College
2011	Linear Models (Linear Regression)	Yezreel Valley College

## 5. Miscellaneous

### a. Works Connected with my Scholarly Field

- Writing of an electronic textbook "The R Programming Language Guide".
- Writing of an exercise's booklet for the courses "Introduction to Statistics" and "Statistics for Information Systems".

## 6. Professional Experience

2015-2020: **Statistical Advisor / Statistician**, Freelancer

- Statistical consultancy for medical device companies: Analysis and design of clinical trials, statistical support to both R&D and quality assurance departments.
- Statistical consultancy for researchers in the academy: Social and behavioral sciences, medical sciences and epidemiology, financial sciences and more.

2015-2016: **Senior Biostatistician**, Technostat:

- Design and analysis of clinical trials in the medical device and pharmaceutical fields: Writing study protocols and statistical analysis plans, calculation of sample size and power, statistical analysis of data and writing of study reports.
- Advanced SAS programming including complex simulations.

2011-2015: **Biostatistician**, the AMIT institute at the Technion:

- Full statistical support for all the companies belonging to the institute.
- Leading the statistical analysis in a big data science project in the medical diagnostics field.
- Design and analysis of clinical trials: Writing study protocols, calculation of sample size and power, statistical analysis of data and writing the study reports.
- Communication with regulatory bodies (FDA, Dekra and others).
- Statistical analysis of quality assurance and R&D data.
- Software development: Design of a database for human resource management, and development of a digital image processing software for medical imaging.