Aplicaciones del Tratamiento Digital de Señales a la Transmisión

4º curso, GITT-GISC

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Universidad
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ATDST

Métodos avanzados de procesado de señal en campo de la Bioingeniería e Ingeniería de datos.

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- Procesado de ECGs para detección de arritmias.
- Procesado de EEGs intracraneales para predicción de ataques epilépticos.
- Procesado de microarrays para expresión genética.
- Introducción al text-mining. Clasificación automática de documentos.
- Sistemas de Recomendación.
- ...

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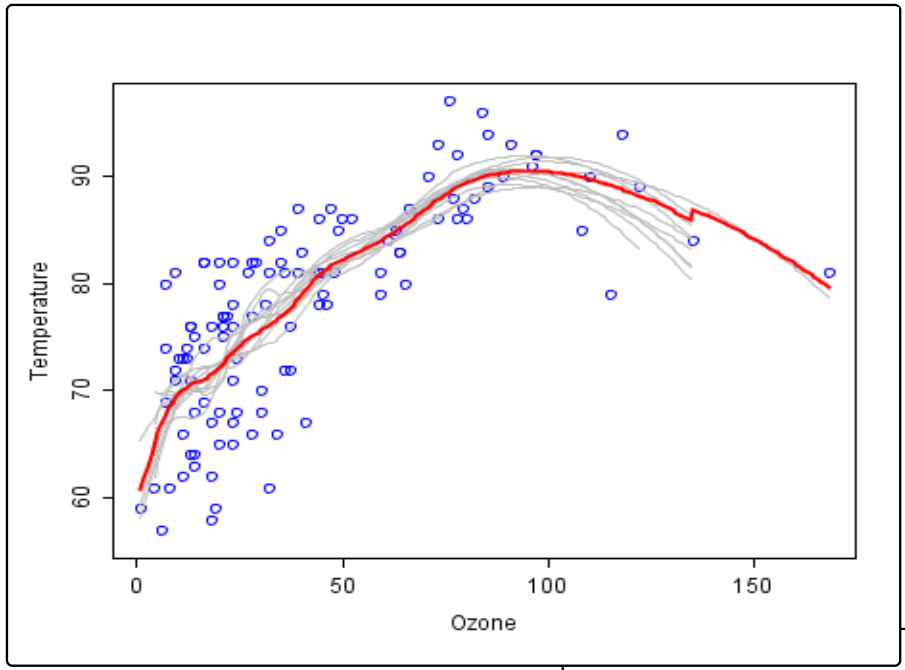
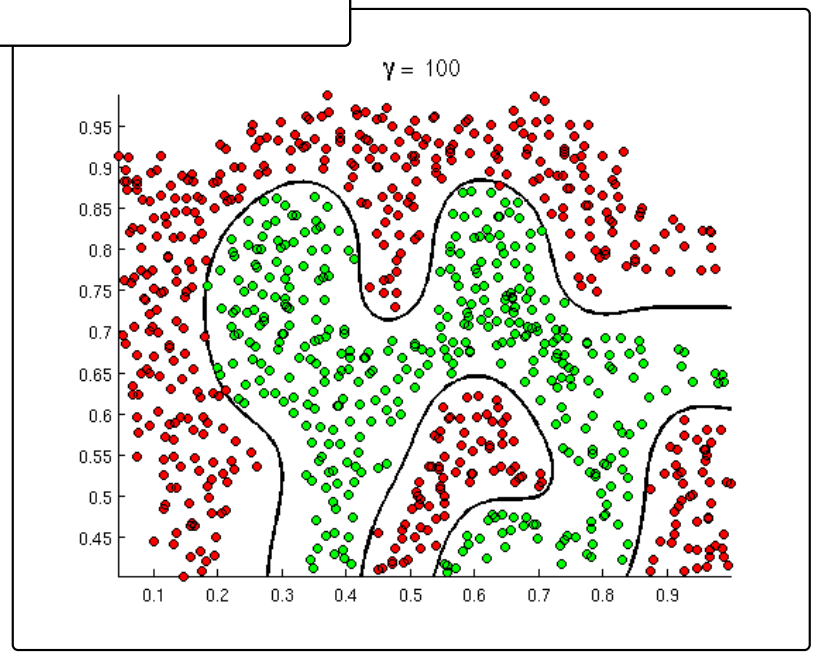
- Multitud de problemas/esquemas avanzados en los que podéis involucrar para la realización de un TFG, TFM, ¿doctorado?

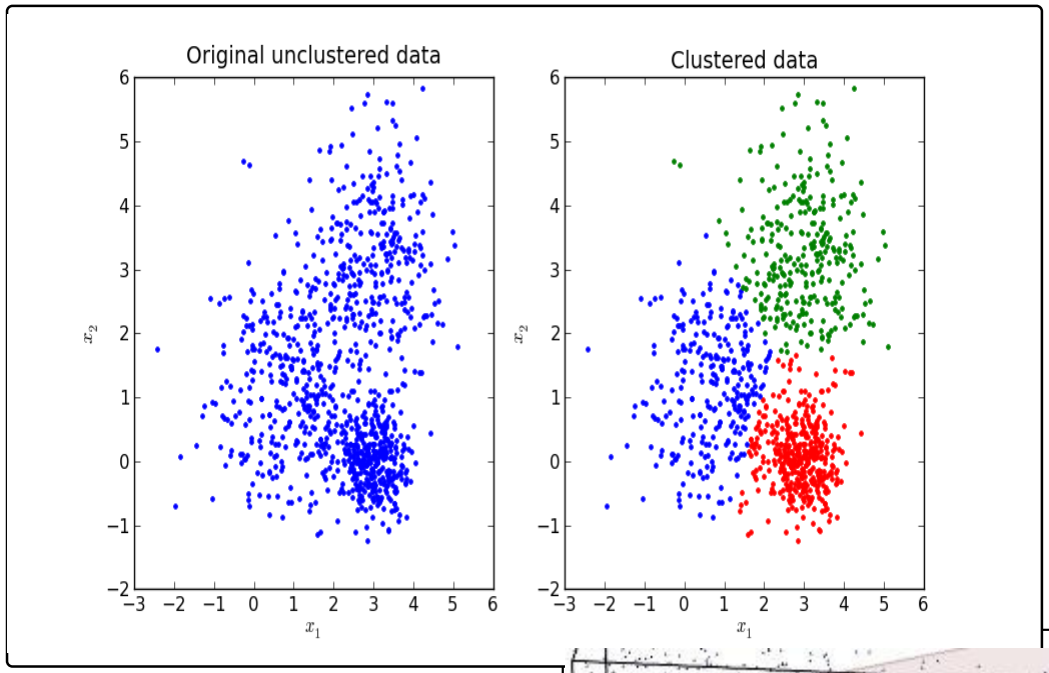


Regresión

Clasificación

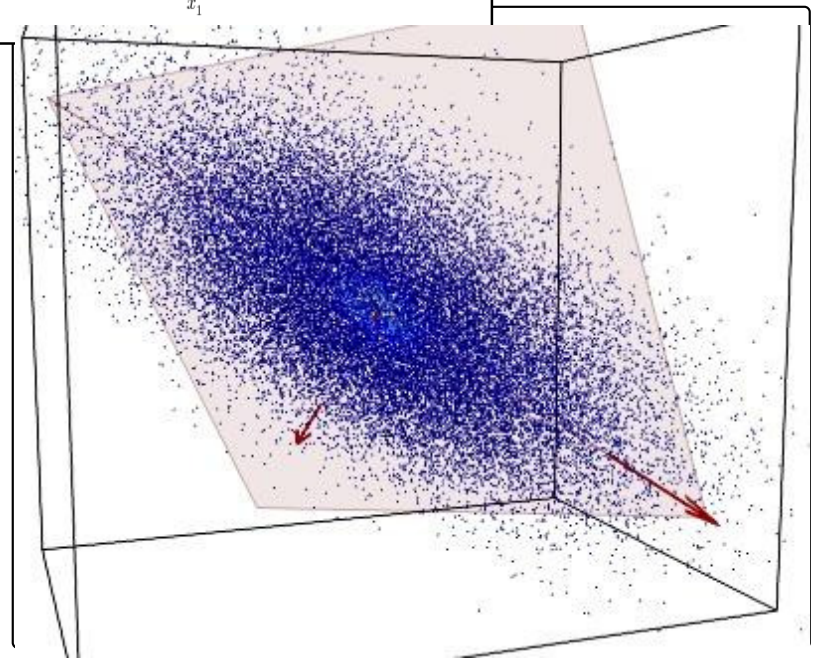


ATDST → Introducción a Machine Learning



Clustering

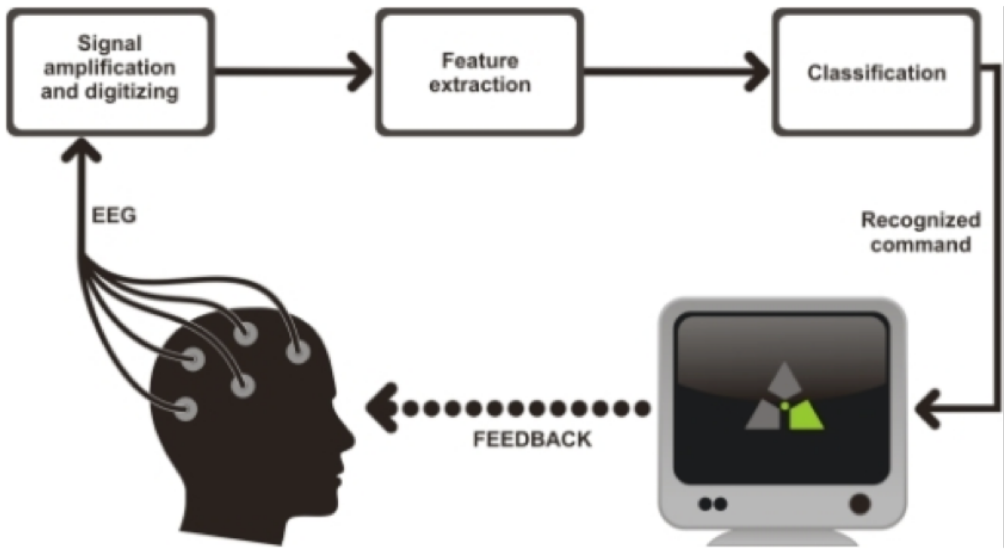
Redución de dimensionalidad (PCA...)



ATDST $\rightarrow$ Ejemplo de aplicación biomédica: Decodificación de Señales Cerebrales para un inferfaz visual

- El objetivo es reconocer la letra en la que el sujeto focaliza su atención a partir de las lecturas EEG.

ATDST $\rightarrow$ Ejemplo de aplicación biomédica: Decodificación de Señales Cerebrales para un inferfaz visual



The State of Big Data Recruiting

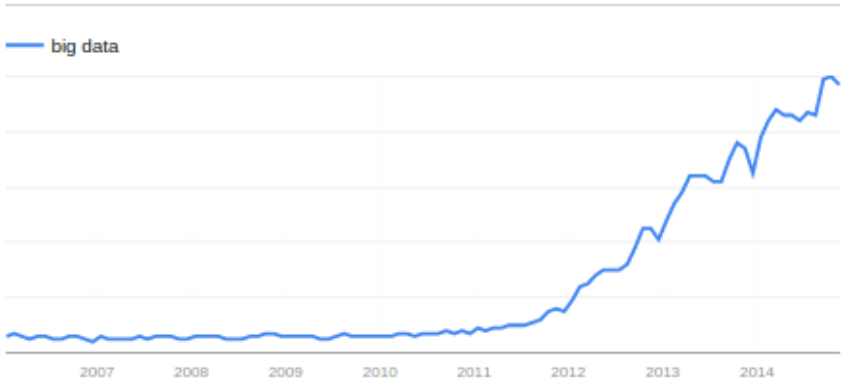
A closer look into the exploding demand for big data expertise

» Posted by *Frank Lo*

Big data has seen an incredible rise to relevance over the past few years, as enterprise in every industry invest to be smarter in how they do business by becoming more data-driven. This movement has enabled the job market for big data expertise to grow at an exponential pace. Some of the most sought-after talent include the following:

- **Data Scientists** – referred to by the Harvard Business Review as the sexiest job of the 21st century
- **DBAs / Database Technology Engineers** – especially expertise in Hadoop and NoSQL technologies
- **Quantitative Analysts and Managers** – team players who can drive forward a data-driven culture

Interest over time based on web search: "Big Data"
(the number 100 represents peak search interest)



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Source: Google Trends

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Expert's Corner

For Big Data specialists only:

- Data Science – Math and Tech
- Data Warehousing – Platforms

Big Data Job Market

Currently in very high demand:

- Data Scientists

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Career Advice

An Explosion Of Bioinformatics Careers

By Alaina G. Levine
June 13, 2014

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Big data is everywhere, and its influence and practical omnipresence across multiple industries will just continue to grow. For life scientists with expertise and an interest in bioinformatics, computer science, statistics, and related skill sets, the job outlook couldn't be rosier. Big pharma, biotech, and software companies are clamoring to hire professionals with experience in bioinformatics and the identification, compilation, analysis, and visualization of huge amounts of biological and health care information. With the rapid development of new tools to make sense of life science research and outcomes, spurred by innovative research in bioinformatics itself, scientists who are entranced by data can pursue more career options than ever before. **By**

Machine learning is becoming commonplace

Posted on November 4, 2015 by Guest Author in Apps, Business Tech, Digital, Digital, Featured, IP, Marketing, Social Media, Technology with 1 Comment

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Australia's small businesses:

ATDST (II)

- Asignatura eminentemente práctica: simulación en Matlab.
- 4 prácticas (por parejas si hay suficientes alumnos ;D).
- Evaluación se basará en vuestros programas y la presentación de resultados y prestaciones.
- **Competición entre grupos!**
  - Todos los grupos implementan los esquemas básicos propuestos.
  - Libremente pueden implementar esquemas más avanzados. Calificación adicional (incluída MH).
  - Comienzo de TFG?