



**Study on job offers in the ICT field in Spain**  
**2<sup>nd</sup> Edition, 1998-1999**

Summary of relevant data

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## ***Characteristics***

- Sample: 747 job profiles published in job ads in national newspapers (on Sundays) in Spain from January 1998 to March 1999.
- Definition of job profile: a specific candidate profile for a specific position of any type in the ICT field which can be assumed by computing professionals except:
  - Those which explicitly require other degrees or exclude computing people.
  - Sales work force without specific requirements of educational level.
  - Junior profiles for candidates without previous experience.
- Data do not allow inferring real employment vacancies but opportunities for candidates.
- Job ads are not investigated to check if they are adjusted to reality. However, those ones which arouse doubts about their correctness were not processed.
- Total number of job ads 747 with the following sources of information:
  - ABC newspaper: 256 (34,27%)
  - El Pais newspaper: 462 (61,84%)
  - Both (ABC and El Pais): 38 (5,08%)
- Location (if not specified, contact data are taken as reference):
  - Madrid: 698 (93,44%)
  - Barcelona: 21 (2,81%)
  - Rest of Spain: 13 (1,74%)
  - Other countries: 15 (2,0%)
- Ads written in:
  - Written in Spanish: 737 (86,62%)
  - Written in English: 10 (13,38%)
- Description of the position included:
  - Includes description: 93 (12,44%)
  - Description not included: 654 (87,55%)

### Sample data

Requirement	Ads	%
Computing services	43,1%	212
Computing/IT	22,6%	111
Not known	11,2%	55
Telco	7,5%	37
Consultancy	5,3%	26
Technology/engineering	2,6%	13
Industrial	2,4%	12
Education	0,8%	4
Insurance	0,8%	4
Transportation	0,8%	4
Government	0,6%	3
Retail	0,6%	3
Finance	0,6%	3
Leisure/tourism	0,6%	3
Editorial, media	0,2%	1
Advertisement/marketing	0,2%	1

Table 1. Economic sectors for job ads

### Technical requirements

Requirement	%	Ads
Developer 2000	9,1%	68
SAP	8,6%	64
Powerbuilder	4,6%	34
Lotus	4,0%	30
CORBA	2,7%	20
Ciente/server	2,4%	18
Reports	2,3%	17
Financials	1,9%	14
Baan	0,9%	7
Meta4	0,9%	7
MS-Backoffice	0,8%	6
ILOG	0,7%	5
CSP	0,5%	4
Synon	0,5%	4
Business Objects	0,4%	3
COM, DCOM	0,4%	3
Navision	0,4%	3
Peoplesoft	0,4%	3

Table 2. Environments, platforms and business applications

Requirement	%	Ads
ORACLE	27,7%	154
DB2	13,5%	75
SQL	12,1%	67
Adabas	8,3%	46
SQL Server	8,1%	45
Informix	7,4%	41
Relational Databases	6,1%	34
Sybase	5,4%	30
MS-Access	4,1%	23
IMS	3,2%	18
Database in general	2,2%	12
Other	1,1%	6
ODBC	0,9%	5

Table 3. Databases

Requirement	%	Ads
CICS	9,2%	69
TCP/IP	9,2%	69
Networks/communication in general	7,2%	54
Novell	6,6%	49
Internet/Intranet & Web	5,4%	40
Microsoft	4,1%	31
X25, X400	3,3%	25
Mail/messaging	2,4%	18
RAL	2,4%	18
Frame Relay	2,3%	17
Proxy, routers	2,1%	16
Specific knowledge (IPX, NFS,...)	2,0%	15
ATM	1,6%	12
SNA	1,2%	9
RDSI	1,1%	8
Other	0,7%	5

Table 4. Communications

Requirement	%	Ads
C++	17,0%	127
Visual Basic	17,0%	127
C	15,3%	114
COBOL	15,0%	112
Java	12,7%	95
HTML	8,4%	63
Visual C++	7,9%	59
RPG	4,8%	36
Javascript	4,3%	32
Delphi	3,3%	25
CGI	2,0%	15
PL/I	1,5%	11
ActiveX	1,3%	10
VBScript	0,7%	5
Ensamblador	0,5%	4
Perl	0,4%	3
Ada	0,3%	2
Turbo Pascal	0,3%	2

Table 5. Programming languages

Requirement	%	Ads
Functional knowledge of specific domains	5,5%	41
Designer2000	3,6%	27
Object oriented design	2,9%	22
Analysis and design methodologies	2,1%	16
Application analysis	2,0%	15
Object oriented analysis	1,9%	14
Object oriented programming	1,3%	10
Case in general	1,2%	9
Application design	1,1%	8
Software quality in general	0,9%	7
METRICA	0,9%	7
Real-time programming	0,8%	6
Testing (methods, tools, etc.)	0,8%	6
PACBASE	0,7%	5
OMT/UML	0,5%	4
Configuration management	0,4%	3
Merise	0,3%	2
Processes (CMM, SPICE)	0,3%	2
BPR and reengineering	0,3%	2
CLEAR/CASE	0,1%	1

Table 6. Software engineering methods, tools, etc.

Requirement	%	Ads
AS400	3,6%	27
DEC	0,4%	3
Host	0,8%	6
HP	2,5%	19
IBM390	0,8%	6
PC	2,0%	15
SUN	2,0%	15
Mac	0,1%	1

Table 7. Hardware

Requirement	%	Ads
UNIX	20,6%	154
Linux	10,0%	75
VMS	9,0%	67
AIX	6,2%	46
WINDOWS	6,0%	45
OS2	5,5%	41
MS-DOS	4,6%	34
WIN-NT	4,0%	30
OS390	3,1%	23
MVS	2,4%	18
GCOS	1,6%	12
OS400	0,7%	5

Table 8. Operating systems

Requirement	%	Ads
Ms-Office	2,8%	21
Security	2,3%	17
Multimedia	1,9%	14
GIS	1,3%	10
Document computing	0,9%	7
ERP implementation	0,9%	7
Photoshop	0,8%	6
Workflow	0,8%	6
CAD	0,7%	5
Datawarehouse & OLAP	0,5%	4
Audit	0,4%	3
Scanner	0,4%	3

Table 9. Miscellaneous category

### ***Non technical requirements***

Requirement	Ads
Licenciado/Ingeniero en informática (Computing higher degree)	21%
Science graduates in general	7%
BS in Computing	7%
BS in Science in general	4%
Vocational training education in computing	2%
Microsoft certificates	2%
Not requirements	58%

Table 11. Educational level

Requirement	Ads
No requirements	65,2%
Fluent English	15,8%
Technical English	10,8%
High level of English	2,7%
Fluent French	1,6%
Written English	1,1%
Some knowledge of English	1,1%
Francés	0,9%
Others	0,7%

Table 12. Language knowledge

Requirement	Ads
Travelling	5,6%
Travelling abroad	2,8%
Libre de servicio militar	1,5%
Inmediate availability	0,7%
Time flexibility	0,7%
Vehicle owner	0,7%
Travelling within Spain	0,7%
Age under 35	0,5%
Age under 25	0,5%
Residence in Madrid	0,4%
Exclusive dedication	0,3%

Table 13. Other requirements