

Scaling law for the validation-set training-set size ratio

$$f/g = \text{root}((c * \ln(N/(a^2)))/h_{\max})$$

<https://pdfs.semanticscholar.org/452e/6c05d46e061290fefff8b46d0ff161998677.pdf>

ID	N	alpha	C	hmax	t	f*	g*	a	b	learning curve	uncertainty	u	u2	f/g (formula)	f/g (a+b)	A
	Classes	p-value	constant	Largest nb of images in a class	size of training database	fraction for val	fraction for training	hmax/t	$(c(\ln(n/\alpha^2)))/t$	$a * (f / (1-f))$	b/f	learning curve + uncertainty	d/f of f	$f/g = \text{root}((c * \ln(N/(a^2)))/h_{\max})$	a+b	f^* / g^*
10/100	10	0,05	1,5	100	1000	0,261	0,739	0,100	0,012	0,035	0,048	0,083	0,000	0,353	0,353	0,353
97/462	97	0,05	1,5	462	10244	0,156	0,844	0,045	0,002	0,008	0,010	0,018	0,000	0,185	0,185	0,185

